

**THE INTRODUCTION AND APPLICATION OF
INTERNATIONAL ACCOUNTING STANDARDS TO
ACCOUNTING DISCLOSURE REGULATIONS OF A
CAPITAL MARKET IN A DEVELOPING COUNTRY:
THE CASE OF EGYPT**

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DEDICATION

To the memory of my mother

and

to my father, my husband and my dear children

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ABSTRACT

The purpose of this study is to perform a rigorous testing and analysis of accounting disclosure practices in a developing country which has adopted the International Accounting Standards (IASs) and has changed towards an economic policy of privatisation after many years of a socialist era. The study also measures the effects on disclosure levels of changes in the economic policy and the new regulations. Furthermore, it investigates the relationship between disclosure levels and company characteristics. A review of the theories which have been used in previous research as a basis for explaining disclosure practices is used to establish *a priori* expectations. The Egyptian economic and social environment and the Egyptian accounting regulations and standards are outlined. From the theory, previous research and the particular circumstances of Egypt, specific empirical research questions are generated and then transformed into hypotheses. A mandatory disclosure list is created which combines the disclosure requirements of the IASs and national regulations using a technique of segmentation which takes into consideration four factors: a) whether the IASs disclosure item is also required both by local established regulations (Companies Act; CA) and by local new regulations (CML); b) whether the IASs disclosure item is required only by local new regulations; c) whether the IASs disclosure item is available in the native language; and d) in which part of the annual report is the disclosure item located.

This technique of segmentation leads to different combinations of disclosure total indices (IASs, CML, CA), partial indices (Partial CML Arabic and Partial IASs not Arabic) and nine sub-indices. This allows detailed statistical analysis and richer interpretation of results. Matched pairs of the annual reports of a sample of Egyptian listed companies in 1991 and 1995 are compared using the aforementioned segmentation of total, partial and sub-indices. Also, a larger sample of 1995 annual reports is analysed to compare the different indices and to investigate any relationship between the indices and selected company characteristics using both univariate and multivariate analysis.

[The study concludes that accounting disclosure by Egyptian listed companies was significantly greater in 1995 than in 1991. Public sector companies which were the largest in size and actively traded in the Stock Exchange provided the highest CML disclosure. Companies audited by one of the 'big-six' offered the highest IASs disclosure. Specific explanations for the increase in various accounting disclosure items and the relationship between various disclosure practices and specific company characteristics are offered based on the segmentation. Theoretical models of agency and capital needs appear to be applicable to the findings regarding Egypt, but the applicability of signalling theory is not clear. Other issues relating to theory are explored in the context of the research findings. Several conclusions are drawn and some policy implications are discussed.]

ABBREVIATIONS

ACCE	American Chamber of Commerce in Egypt
adjR²	Adjusted R Squared.
CA	Companies Act
CAO	Central Auditing Organisation
CMA	Capital Market Authority
CML	Capital Market Law
D/NICs	Developing and Newly Industrialised Countries
EAAA	Egyptian Association of Accountants and Auditors
EASs	Egyptian Accounting Standards
EBAS	Egyptian Board for Accounting Standards
EFG	Egyptian Financial Group
EIAA	Egyptian Institute of Accountants and Auditors
EIU	Economist Intelligence Unit
ERs	Executive Regulations
ESIS	Egyptian State Information Services
GAAP	Generally Accepted Accounting Principles
GAFI	General Authority for Investment
GDP	Gross Domestic Product
IASC	International Accounting Standards Committee
IASs	International Accounting Standards
IBFD	International Bureau of Fiscal Documentation
IFAC	International Federation of Accountants Committee
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commissions
K-S	Kolmogorov-Smirnov
MNCs	Multinational Companies

MSE	Mean Square Error
PCML	Partial Capital Market Law index
PCML_A	Partial Capital Market Law Arabic index
PIASs	Partial International Accounting Standards index
PIAS_{NA}	Partial International Accounting Standards not Arabic index
SAA	Syndicate of Accountants and Auditors
SOCP	Syndicate of Commerce Professions
SPSS	Statistical Package for Social Sciences
UAS	Uniform Accounting System
UK	United Kingdom
UNCTAD	United Nation Committee for Trade and Development
US	United States
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics

CHAPTER 1

1. BACKGROUND, OBJECTIVES AND OVERVIEW OF THE STUDY

1.1 Introduction

Egypt is a developing country whose Stock Exchange dates from 1882. This exchange grew until it was considered to be the fifth most active market in the world in the 1950s (ACCE, 1995). In the late 1950s there began a process of nationalisation in various economic sectors which led into a socialist era. As a result, the activities of the Stock Exchange decreased dramatically. Thereafter the Stock Exchange remained inactive for 30 years. In the early 1990s, Egypt decided to change towards privatisation of its public sector companies and to move towards a market economy. Consequently the activities of the Stock Exchange have increased considerably. The Stock Exchange was considered one of the best performing markets in 1994 (EFG, 1996). Also, it was added to the list of Emerging Markets in 1997 (ESIS, 1997).

Egypt is a well-respected country in the Arab region (Middle East). In the past it has been said that many of the regulations of other Arab countries were significantly influenced by the Egyptian regulations and prepared with the advice of Egyptian experts (Ba-Eissa, 1984). This means that Egypt has exerted an influence on other countries in the region. Therefore, the outcomes of the Egyptian experience might be helpful for other developing countries generally and for Arab countries specifically.

External disclosure of accounting information was neglected in Egypt during the socialist era. This is because of the dominance of the public sector on most of the economic activities. The government had privileged access to the books and accounts of those

companies. The private sector was relatively small and most companies were closed companies. This means a company which is owned by relatives in a family and / or the number of shareholders is less than 15 (ACCE, 1995). Those companies were governed by the Companies Act no 159 of 1981(CA). The disclosure requirements of the CA are primarily directed at the formats of the financial statements, but pay relatively little attention to detailed notes of explanation. All of these factors resulted in very poor external accounting disclosure for decades (Tawfic, 1993). After Egypt began its comprehensive programme of privatisation in 1991 the Stock Exchange activities began to grow. There was a great need to improve public accounting disclosure. Therefore, a new Capital Market Law no 95 (CML) was issued in 1992. This new CML and its Executive Regulations (ERs) can be considered one of the most important steps towards improving external accounting disclosure by companies listed in the Egyptian Stock Exchange. For the first time in Egypt, the CML introduced a comprehensive disclosure package. It also included Statement 58, which requires listed companies to follow the International Accounting Standards (IASs) in matters not included in the regulations. The CA remains applicable for non-listed companies and for listed companies in respect of provisions and items not included in the CML, which mainly are the disclosure items required in the report of the board of directors.

Egypt has adopted and adapted the IASs in different ways. First, in the period 1987 to 1992 there were 20 Egyptian Accounting Standards (EASs) issued. Those EASs are almost the same as their IASs counterparts extant at the time when EASs were issued. Second, in 1993, Egypt decided to adopt the entire IASs through its new Capital Market Law 95 of 1992 (CML) and its Executive Regulations (ERs). Third, in 1996 a new standard setting board was established with the aim of issuing new Egyptian standards that mainly conform to the IASs after taking the Egyptian environmental factors into consideration.

In this chapter, the general research objectives and the specific empirical objectives are presented in sections 1.2 and 1.3 respectively. The definitions of terms used in this research are discussed in section 1.4. The research questions are outlined in section 1.5. A summary of research methods is presented in section 1.6. The limitations of the study are discussed in section 1.7. The contribution of this research is summarised in section 1.8. The importance of this research in relation to the development of accounting theory and in relation to Egypt and other developing countries is outlined in section 1.9. A description of the organisation of the thesis is given in section 1.10.

1.2 General research objectives

The aim of this study is to make a contribution to the international accounting literature generally, and to the literature of accounting in developing countries specifically, in particular, the aim of this study is to explore the applicability of disclosure theories in relation to emerging capital markets. Furthermore, the aim of this study is to make a contribution to the academic literature on methods of measuring accounting disclosure in developing countries.

1.2.1 Contribution to the literature of accounting in developing countries especially in terms of applicability of disclosure theories and enhancing the understanding of the IASs in relation to Egypt (General objective 1)

The contribution to the literature of accounting in developing countries is achieved in the following ways:

- a) Reviewing theories of disclosure, related issues and the applicability of these theories to developing countries. These theories have been

employed as the framework for forming prior expectations leading to hypotheses for testing by empirical analysis.

- b) Explaining how the accounting standards and regulations in Egypt (as an example of a developing country) have been affected by the IASs. This also points to the urgency of considering any special needs of developing countries.
- c) Rigorous testing and analysis of accounting disclosure practices in a developing country which has adopted the IASs and which has changed towards privatisation after many years of socialism.

1.2.2 Contribution to the literature of measuring accounting disclosure (General objective 2)

In relation to methods of measuring accounting disclosure in developing countries, this research is driven by the question: Can disclosure measurement techniques which have been applied to developed countries be adapted and extended to be more relevant to a complex regulatory system such as that found in Egypt? In the regulatory system in Egypt, various regulations are in effect at the same time. Also there is overlap in some respects between the disclosure requirements of three different regulations applicable to listed companies. Additionally, one part of the IASs disclosure requirements is appended in Arabic to the Capital Market Law while the other part is not.

1.3 Specific objectives of the empirical work of the research

The specific objectives of the empirical work of the thesis meet the general objective 1(c) of rigorous testing and analysis of accounting disclosure practices in a developing country which has adopted the IASs and which has changed towards privatisation after

many years of a socialist era. The aim of the empirical work is to carry out a rigorous testing of accounting disclosure practices in the annual reports of a sample of Egyptian listed companies. More precisely, those research objectives are as follows:

1.3.1 Effects of the new regulations (Specific objective 1)

- Exploring the effects of issuing the new CML and mandating the IASs on various levels of accounting disclosure by Egyptian listed companies.

1.3.2 Requirements of various regulations and the effect of familiarity and language on disclosure (Specific objective2)

- Assessing the extent of disclosure in corporate annual reports of Egyptian listed companies according to the requirements of various regulations (CA, CML and IASs).
- Exploring the effect of familiarity and language on disclosure.

1.3.3 Company characteristics and extent of disclosure (Specific objective 3)

Providing empirical evidence on the characteristics of Egyptian listed companies in relation to the extent of mandatory information provided in their annual reports which enhance our understanding of the applicability of disclosure theories in an emerging capital market.

1.4 Definitions of terms used

The following definitions are relevant to terms used in this chapter and throughout the thesis.

1.4.1 Disclosure

Disclosure is defined by Kohler (1957, p.307) as “*A clear showing of a fact or condition on a balance sheet or other financial statement, in footnotes thereto, or in the audit report*” and by Gibbins et al., (1990) as “*Any deliberate release of financial information, whether numerical or qualitative, required or voluntary, or via formal or informal channels*”. The current research focuses on mandatory disclosure in the annual reports of Egyptian listed companies.

1.4.2 Private sector and public sector companies

Private sector companies are in private ownership and can be incorporated either under the Companies Act of 1981 or the Investment Law of 1989. In either case the accounting disclosure is governed by the Companies Act of 1981 (CA). Some private sector companies are listed: others are not. Listed companies have to comply with the Capital Market law (CML), the Companies Act and the IASs in matters not included in the CML.

State-owned companies are referred to as “public sector companies”. Some are in the process of privatisation. Because of this, such companies are listed. When they are listed they are called Public Business Sector companies. For convenience of reference these will be called “public sector” in this research. Public sector companies which are listed in the Stock Exchange are required to comply with the Capital Market Law, the Companies Act and the IASs. In addition, these companies are required to prepare accounts and reports according to the Uniform Accounting System for control and performance evaluation purposes. This research is limited to the reports and accounts prepared according to the Capital Market Law, the Companies Act and the IASs.

1.4.3 Titles of financial statements

The 'Statement of Financial Position' is referred to in this thesis as the 'balance sheet' for ease of reference. The term 'Income Statement' is the correct terminology under the CML but 'Profit and Loss account' is still used within the CA. For consistency, 'income statement' will be used throughout.

1.5 Research questions

The general research objectives are transformed into four general research questions as follows:

General question 1 (general objective 1a)

What are the disclosure theories which can be used in forming *a priori* expectations on accounting disclosure practice in Egypt?

General question 2 (general objective 1b)

How have the IASs been introduced to Egypt, as an example of a developing country?

General question 3 (general objective 1c)

What is the state of accounting disclosure practice in Egypt? This question leads to the detailed empirical research questions?

General question 4 (general objective 2)

How can a disclosure index relevant to mandatory requirements in Egypt be developed?

The specific objectives of the empirical research lead on from general question 3 and are transformed into specific empirical research questions and sub-questions as follows:

Empirical research question 1

To what extent did listed companies show indications of disclosing more information following the introduction of the CML?

The expectation based on prior studies (Khasharmeh, 1995 and El-Modahki, 1995) is that disclosure will increase after the introduction of the new regulations. This question is divided into the following sub-questions:

1(a) What is the level of compliance by Egyptian listed companies with the requirements of the CA in 1991 and 1995?

1(b) What is the extent to which these companies made voluntary disclosure in 1991 of additional items which were known to exist in the IASs or subsequently were incorporated in the CML?

1(c) What is the extent by which these listed companies responded to the additional disclosure requirements of the CML and IASs after these became mandatory?

1(d) Is there any significant increase in the various disclosure indices?

1(e) Is there any significant increase in the sub-division of disclosure indices (sub-indices)?

1(f) Is there any difference in the timeliness of annual reports as another measure of improvement in disclosure (Abayo et al., 1993)?

Questions 1(a), 1(b) and 1(c) are answered by exploratory data analysis, while questions 1(d), 1(e) and 1(f) are answered by statistical testing. The expectation for 1(d) and 1(e) is that disclosure will increase. The expectation for 1(f) is that the time will be shortened (Abayo et al., 1993).

Empirical research question 2

Empirical research question 2 is in three parts:

2(a) What is the level of compliance of Egyptian listed companies with the disclosure requirements of different laws and regulations (CA, CML, and IASs)?

2(b) Do Egyptian listed companies differ in their level of compliance with the established law (CA) as compared with the new regulations (CML and IASs)?

2(c) Do Egyptian listed companies differ in their level of compliance with the additional disclosure requirements of the new regulations (CML and IASs) according to the language in which the requirements are publicly available?

The expectation for 2(b), based on developments in regulations (chapters 3 and 4) and previous research (Nicholls and Ahmed, 1995), is that compliance with the established laws and regulations will be higher than with the new regulations. In addition, lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure (Tai et al., 1990).

The expectation for 2(c), based on observation of the educational process is that compliance with the additional disclosure requirements appended to the CML in Arabic

(pCML_A) will be higher than the IASs additional disclosure requirements not appended to the CML. These are the additional disclosure requirements of the IASs which have to be followed by companies according to Statement 58 of the CML but are neither translated nor appended to the CML. They are denoted pIASs_{NA} in this research. This is because accounting is mainly taught in Arabic with minor exception and the lack of an official Arabic translation (see chapters 3 and 4),

Empirical research question 3

Empirical research question 3 is as follows:

Is there a significant association between any of the disclosure indices of a company and its characteristics?

Results of prior research have differed, depending on the country studied. Accordingly some prior expectations are formed about the direction of association where the evidence from previous work is strong (such as for the size factor). For other characteristics there are no prior expectations because of the conflicting evidence in previous work.

1.6 Summary of research methods

This section summarises the key aspects of the research methods used in the empirical work.

1.6.1 Constructing a relevant disclosure list and calculating the index

The disclosure list for this work is developed specifically to match the particular regulatory requirements of Egypt. As the starting point, a comprehensive analysis is carried out of the disclosure requirements of each of the CA, CML and IASs. Three

different disclosure lists are constructed in the first stage. However, some care is needed because of the overlap across these laws in relation to some of the disclosure items. Segmentation into five main categories is carried out to avoid duplication of disclosure requirements (chapter 5). Thereafter two of the main categories are further subdivided according to location in the financial statements (balance sheet, income statement and notes to the accounts), giving nine sub-lists in all. From these nine mutually exclusive categories, three total indices are constructed and the IASs disclosure list is subdivided by considering the following three dimensions simultaneously:

- (1) Whether the disclosure item is required by one or more local regulations.
- (2) Whether the disclosure item is available in the native language or not.
- (3) The part of the annual report in which the item is located.

Dividing the list into 9 sublists and calculating 9 sub-indices allow extensive analysis of the detail of change in the indices and avoid duplication which improves exploratory and statistical analysis.

Further consideration is given to dividing the sub-lists where a part of the disclosure requirements is appended to the CML in Arabic but another part of the disclosure requirements is not available in an official translation.

As a result, there are three total indices (CA index; CML index; IASs index), four partial indices and nine sub-indices. All indices are calculated separately for the annual report of each company.

The three main empirical research questions are transformed into three main research hypotheses, H1, H2 and H3 (see chapter 5). These are divided into a number of sub-hypotheses (as a development of the approach taken by Cooke, 1989a) which correspond to the number of total partial and sub-indices.

1.6.2 Selection of sample and collecting the annual report

Listed companies on the Egyptian Stock Exchange represent the population for this research study. The Egyptian Stock Exchange has around 700 listed companies. Of these the shares of around 100 are traded. Shares of the other 600 companies are rarely traded. These are companies which either were listed under the provisions of the previous regulations or were listed for tax exemption purposes.

It is very difficult to obtain annual reports of companies in Egypt. In principle the annual reports of listed companies can be obtained from the Capital Market Authority (CMA) but in practice it requires personal visits and much persistence. After several contacts for around a year the researcher had no success in collecting the reports through correspondence. At last, on a visit to Egypt, the researcher was able to collect the annual reports of 72 companies for the 1995/6 period. In 20 cases there was a matching annual report for the year 1991/2.

1.6.3 Measuring disclosure and developing the index

A disclosure index method is used. This study takes the commonly used approach of giving the item a disclosure score 1 if it is disclosed and 0 if it is not disclosed (see for example; Firth, 1980; Wallace, 1987; Cooke, 1989a; Abayo et al., 1993). To reduce subjectivity in determining the applicable items, the whole annual report was read first to make a judgement about whether a particular item was relevant as suggested by Cooke (1989a) and followed by Hossain et al (1994) and Nicholls and Ahmed (1995). As a result, a company is not penalised for not disclosing an item which is deemed to be irrelevant to its activities.

Then the disclosure index, for each company and for each item, is calculated as the ratio of the total actual score awarded to the maximum possible score applicable for that item, or company.

To avoid subjectivity, the study relies on an unweighted score approach, giving the same importance to each disclosure item (Wallace, 1987; Cooke, 1989a; Abayo et al., 1993; Belkaoui, 1994; Hossain et al., 1994).

1.6.4 Data examination and statistical tests used in testing the hypotheses

To review the data, Stem-and-Leaf Plots and the Kolmogorov-Smirnov (K-S) test, with Lilliefors significance, are applied. Hypotheses H1 and H2 are tested using the Wilcoxon Matched-Pairs Signed Ranked test and the Matched-Pairs t test. Hypothesis H3 is tested using both univariate and multivariate analysis.

For the univariate analysis the relationship between company characteristics and disclosure indices is examined one at a time. Continuous variables are tested by computing Spearman's rank correlation coefficients. Categorical variables are tested by using Wilcoxon-Mann-Whitney test.

For the multivariate analysis, transformation of data is used before running the multiple regression analysis, following the example of Lang and Lundholm (1993), Wallace et al (1994), Wallace and Naser (1995) and Cooke (1998).

1.6.5 Explanatory variables

The company characteristics include five continuous variables and four categorical variables. In addition, timeliness is added as a characteristic for testing.

The **continuous** variables are measured as follows:

- Profit ratio is measured as the ratio of pre-tax profit to shareholders' equity at the balance sheet date.
- Gearing is measured as the ratio of the book value of long-term debts to shareholders' equity at the balance sheet date.
- Sales are measured as the 'net sales', meaning sales net of any returns.
- Assets are measured as the book value of total assets at the balance sheet date.
- Liquidity is measured as the ratio of current assets (after deducting inventory) to current liabilities.

The **categorical** variables are defined in two groups, as follows:

Group 1: Variables applied in previous research

- Type of business activity is represented by 1 if the company is industrial and 0 if non-industrial.
- Audit firm is represented by 1 if the company is audited by one of the 'big six' and 0 if audited by any other firm.

Group 2: Variables especially relevant to Egypt

- Legal form is represented by 1 if the company is a public sector company (intending to be privatised in the near future or already partially privatised) and 0 if it is a private sector company.
- Share trading in the stock exchange is represented by 1 if the shares are traded and 0 if the shares are rarely traded (listed for tax exemption offered to listed companies).

Another characteristic used in previous research in the disclosure literature is the timeliness of the annual report (Abayo et al., 1993). For this research, the timeliness of

the annual report is taken as being the difference (in months) between the financial year-end and the date of signature of the audit report.

1.7 Limitations of the study

This study is limited to mandatory disclosure only, as there is an assumption that Egyptian listed companies are not expected to make a great deal of voluntary disclosure at this early stage of privatisation, after nearly thirty years of a socialist era during which disclosure was neglected. Also the mandatory disclosure requirements can be considered to be extensive after mandating the IASs. The study covers non-financial companies only, as banks and insurance companies are excluded for having different regulations and nature. The disclosure part of the IASs is covered in full but the measurement part of the IASs has been excluded. The latter will be surveyed by a questionnaire in future research. The sample is constrained by the availability of 72 annual reports for 1995, and for 1992 a matching 20 was available. This meant that the sample could not be truly random. However, the company characteristics reported in chapter 8 indicate that a good range of companies has been covered.

1.8 Contribution of this research

The research meets the general and specific research objectives in the following ways.

In meeting general objective 1, there is a contribution to the literature of accounting in developing countries in terms of applicability of disclosure theories to an emerging capital market and by increasing the understanding of the application of IASs in to Egypt.

In meeting general objective 2, the contribution to the literature of measuring accounting disclosure is the construction of an IASs disclosure index, which is suitable for the

Egyptian situation. The disclosure index is novel in considering the following three dimensions simultaneously:

- (1) Whether the IASs disclosure item is required by one or more local regulations.
- (2) Whether the IASs disclosure item is available in the native language or not.
- (3) The part of the annual report in which the item is located.

This results in constructing a disclosure list which is segmented into 9 sub-lists. This segmentation technique can be used in other country studies. Furthermore the extensive analysis of accounting disclosure practices of a sample of Egyptian listed companies leads to richer interpretation of results and allows strong and specific conclusions to be drawn on matters of detail in disclosure practice.

In meeting specific objective 1, the research makes a contribution of in-depth analysis of the effects of the new regulations on accounting disclosure practices in 1991 and 1995 (before and after the new CML was issued and the IASs were mandated).

In meeting specific objective 2, the research makes the contribution of calculating separate indices for the requirements of various regulations CA, CML and IASs which allows testing the difference between established and new regulations. Furthermore, the calculation of two partial indices (partial CML Arabic and partial IASs not Arabic) allows the testing of a language barrier effect on disclosure. This is a new factor which has not been tested in disclosure studies before and is likely to arise in other non-English speaking countries which have a Stock Exchange which mandated or recommended the application of the IASs. The same approach can be followed in future research.

In meeting specific objective 3, the research offers extensive testing of relationships between company characteristics and the extent of disclosure, using both univariate and multivariate analysis, which allows strong conclusions to be drawn on which company characteristics govern accounting disclosure practices of Egyptian listed companies.

1.9 Importance of the current research

This section explains the importance of empirical research to the development of accounting theory. It contrast positive and normative approaches in the context of this work and it points to the non-existence of perfect theory indicating that this research is aiming to make a contribution to the understanding the applicability of existing disclosure theories to developing countries.

1.9.1 Importance of empirical studies to the development of accounting theory

Different approaches have been identified in the literature to the development of financial accounting theory (for more detail see Whittington, 1986). One major approach is the empirical approach. The current study includes empirical work as a major element. Whittington (1986) indicated that empirical research has had an important impact on the development of accounting theory in three ways:

- Empirical evidence has provided a means of resolving the debate between theories.
- The evolution of accounting theory has taken it into areas where empirical research is a natural complement to abstract theorising.
- The information economics approach has considered the costs and benefits of accounting information as an economic commodity.

Empirical research as stated by Whittington (1986) is a “potentially fruitful source of knowledge...This will have wholly beneficial effects provided that empirical research and theory are seen as complementary activities rather than competing with one another. In the advancement of knowledge in an applied discipline like accounting, there must surely be scope for rigorous logical deduction in the formulation of theories and the regular confrontation of the assumptions and predictions of theories with empirical data in order to establish their relevance to the real world”.

The empirical work of this Ph.D. will make a general contribution in the area of information economics. But it will more particularly contribute to the theory of emerging capital markets in developing countries.

1.9.2 Positive and normative dimensions of research

In social science research a crude distinction is often drawn between efforts to understand things as they are and efforts to elaborate how things should be. The former has typically been characterised as positive and the latter as normative. A particular kind of positive research is that advocated by Watts and Zimmerman (1978). They are concerned to test hypotheses by observation and to provide explanations for accounting and disclosure practice in corporate annual reports. Spicer (1980) elaborates on a normative approach concerned with a prescription of what companies should be doing.

One of the specific empirical objectives of this research is the determination of the factors that explain the level of financial disclosure of Egyptian listed companies. It therefore follows a positive accounting approach and draws from several theoretical positions associated with the work of Watts and Zimmerman (1978) and related literature, such as agency theory, theory of political costs and signalling theory. However, normative and positive approaches are not in conflict with each other: rather they are considered to be

complementary (Inchausti, 1997). A positive approach can clearly have normative implications once an objective function is specified (Jensen, 1983). Further, no research can properly claim to be free of values in a general sense (e.g. Chua, 1986). The empirical approach employed in this research will have normative implications, which might help policy makers to achieve their objectives.

1.9.3 The limitations of theories

Although positive accounting literature has discovered several empirical regularities in accounting choice, Watts and Zimmerman (1990) admit to the imperfections of accounting and social science theory.

Theories are simplifications of reality and the world is complex and changing (Watts and Zimmerman, 1986). Hence, for Watts and Zimmerman (1986, pp. 10-11), the mere fact that a theory does not predict perfectly does not cause researchers or users to abandon that theory. While prediction errors may not cause abandonment of a theory, those errors are important. In fact, they are very important, because investigation of them frequently leads to improvements in the accepted theory and might lead to development and acceptance of a completely new theory.

Accounting is an activity carried out by people and one cannot generate a theory that explains accounting phenomena by ignoring the incentives of the individuals who are in the accounting profession. In addition, institutional differences have to be taken into account in order to achieve better explanations of research findings in different countries (Watts and Zimmerman, 1990).

This current research tests the applicability of disclosure theories to a developing country, which has an emerging capital market, in an attempt to *enhance* the theoretical explanations of disclosure in developing countries.

The research is also concerned with factors which are likely to affect disclosure in Egypt but are not covered by established disclosure theories. These include the effect of familiarity, language and managers' orientation. The researcher has also adapted the capital need theory to suit the situation of Egypt. Instead of testing the effect of multi-listing on disclosure, the effect of share trading is tested.

Thus the concern is to refine and develop theory and develop argumentation upon which to build in future.

1.9.4 Importance of the current study to Egypt and other developing countries

The significance of this study is argued from the perspective of inadequate coverage of issues relating to accounting disclosure in Egypt specifically and developing countries generally. Also, studying the levels of mandatory disclosure in the annual reports of Egyptian listed companies will help potential investors who desire to invest in Egypt (Wallace and Naser, 1995). Additionally, knowledge of the relationship of the level of disclosure to company characteristics may be of use to regulators.

The research is based on the premise that the IASs have become largely accepted in many countries of the world, especially developing countries. However, acceptance does not necessarily mean that there has been thorough testing of the application of the IASs in practice. This study focuses in the application of the IASs in the period immediately after they were mandated in Egypt.

Although this study has specific relevance to the needs of the Egyptian environment, it is believed that other developing countries, especially Middle Eastern countries, will benefit from it.

1.10 Organisation of the thesis

The organisation of the thesis follows the objectives and research questions as shown in tables 1.2 and 1.3. The general objectives and related questions are dealt with in various chapters as shown in table 1.2.

Table 1. 1General objectives and research questions

<i>Objective</i>	<i>Research questions</i>	<i>Chapter</i>
General 1a	General 1	2
General 1b	General 2	3 and 4
General 1c	General 3	7, 8 and 9
General 2	General 4	5 and 6

General objective 1c (general question 3) leads into three specific empirical objectives and three empirical research questions which are dealt with in chapters 7, 8 and 9 as shown in table 1.3.

Table 1. 2 Specific objectives and research questions

<i>Objective</i>	<i>Research questions</i>	<i>Chapter</i>
Specific 1	Empirical 1	7
Specific 2	Empirical 2	8
Specific 3	Empirical 3	8 and 9

This thesis is divided into 10 chapters as follows:

Chapter 1: Is a summary of this research study and introduces the different elements of this thesis in terms of objectives, research questions, summary of research methods, limitations, and contribution and organisation of the thesis.

Chapter 2: Is constituted by a review of theories of disclosure, related issues and the applicability of these theories to developing countries. These theories have been employed as the framework for forming prior expectations leading to hypotheses for testing by empirical analysis.

Chapter 3: Provides general background information about the economic development, accounting profession development, Stock Exchange development, accounting education, culture, language and religion of Egypt. This environmental background is used in the interpretation of the empirical results and in making policy recommendations.

Chapter 4: Provides a review of the accounting standards and regulations which were in effect at the date of this study. The accounting regulations are the basis used to construct the relevant mandatory disclosure list in chapter 5.

Chapter 5: Presents the empirical research questions and their conversion into research hypotheses. It also gives an explanation in detail of the construction of a mandatory disclosure list relevant to Egypt and the segmentation of that list and how the main research hypotheses are subdivided into sub-hypotheses.

Chapter 6: Presents a summary of research methods followed in the thesis. The selection and collection of the research sample and the approaches followed in scoring and calculating the indices and sub-indices are explained in detail. The statistical methods used and the explanatory variables tested in this research are outlined.

Chapter 7: Contains a report of the results of testing matched pairs of 20 Egyptian companies for two periods (1991 and 1995). The impact of the new CML, the IASs and the new economic policy is reported. The testing is extensive, including total indices, partial indices and sub-indices and specific disclosure items. Conclusions are drawn.

Chapter 8: Contains a report on the results of assessing 72 annual reports for the period 1995. For each annual report three total indices, two partial indices and nine sub-indices are calculated. The various total indices are compared and tested for any significant differences between established and new regulations, and for the effects of a language barrier (H2). Also each of the total, partial and sub-indices are tested for any relationship between any of them and company characteristics. The results of univariate analysis are reported in the chapter. Conclusions are drawn.

Chapter 9: Contains a report of the results of the multivariate analysis between the various total, partial disclosure indices and sub-indices and company characteristics using multivariate regression. Conclusions are drawn.

Chapter 10: Summarises the findings of this study, assesses the implications and identifies recommendations and future research.

CHAPTER 2

2. THEORIES OF DISCLOSURE

2.1 Introduction

As explained in chapter 1, this study aims to make a contribution to enhancing knowledge of corporate financial reporting and disclosure practices in emerging capital markets. In particular, it aims to explore the applicability of disclosure theories in relation to emerging capital markets.

The objective of this chapter is to discuss disclosure theories, related issues, and the applicability of these theories to developing countries. Expectations of research hypotheses in relation to disclosure practices in Egypt are extracted from the discussion.

There are several theories (section 2.2), which have been employed in the accounting literature to explain *voluntary* disclosure practices in many countries. These theories have been explored in some of the literature on disclosure in developing countries (section 2.3). However, there is no published study which investigates the applicability of these theories to Egypt. This study employs these theories as the framework for forming prior expectations leading to hypotheses for testing by empirical analysis (sections 2.3 and 2.4). Eight explanatory variables that capture the most common company characteristics tested in previous research are discussed in the chapter in terms of the supporting theory (section 2.4). The chapter summarises previous disclosure studies which are relevant to the current research in appendices 2.1, 2.2 and 2.3. The material in the appendices is used at various points of this thesis.

2.2 Disclosure theories and related issues

There are several theories in the literature which have been used in explaining variation in disclosure between companies. The most common theories used in offering factors which help in interpreting disclosure practices observed in previous research are agency theory, capital need theory and signalling theory. These theories in some senses emphasise different aspects of the phenomena to be explained and to this extent they are not mutually exclusive (Morris, 1987). The theories are summarised briefly in this section. Related issues of regulating disclosure and costs of compliance are also discussed.

2.2.1 Agency theory

The relationship between shareholders (principals) and managers (agents) is an agency relationship. Jensen and Meckling (1976) define an agency relationship as “*a contract under which one or more persons (principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent*”. In the context of the firm, managers acts as agents for the equity suppliers (shareholders and bondholders) who represent the principals. Two potential conflicts of interest exist: the shareholder/manager conflict, giving rise to the agency cost of equity, and the bondholder/shareholder-management conflict, giving rise to the agency cost of debt. These agency costs are composed of a residual loss, bonding expenditures by the agent (manager) and monitoring expenditures by the principal (Kelly, 1983).

If different parties act self-interestedly, these separations produce conflicts and agency cost falling on either equity holders or debt holders (Morris, 1987). One way of reducing agency costs is to produce accounting reports and to increase the amount of information included in these reports (Marston and Shrives, 1996).

Many disclosure studies (e.g. Salamon and Dhaliwal, 1980; Leftwich et al., 1981; Chow and Wong-Boren, 1987; Ruland et al., 1990; Cooke, 1989a, 1991 and 1993; Bradbury, 1992; Craswell and Taylor, 1992; McKinnon and Dalimunthe, 1993; and Hossain et al., 1994) have used agency theory to explain cross-sectional variation in voluntary disclosure practices.

Agency theory suggests several variables for explaining cross-sectional variation in voluntary disclosure levels. In particular, firm size and gearing have frequently been hypothesised to affect voluntary disclosure by influencing the magnitude of agency costs or the cost of manager-external owner contracting (Leftwich et al., 1981; Holthausen and Leftwich, 1983; Kelly, 1983 as cited in Chow and Wong-Boren, 1987).

The applicability of agency theory to this study of Egypt is discussed in section 2.4 where also the explanatory variables of size and gearing are discussed.

2.2.2 *Capital need theory*

Capital need theory suggests that the need to raise capital is a prime motive for disclosure. Companies desire to raise capital as cheaply as possible. Greater financial disclosure may be perceived by companies as reducing investor uncertainty and may allow that new capital be raised more cheaply (Choi, 1973; Firth, 1980 and Cooke, 1993). Increasing compliance with mandatory disclosure and the relative amount of voluntary disclosure increases the ease by which new capital can be raised (Cooke, 1993 and Marston and Shrives, 1996).

The concept of “Capital need” has been referred to in a number of previous research studies e. g. Cooke (1989a) and Meek and Gray (1989). Capital need theory was used by

Cooke (1989a) to explain why listed companies disclose more than unlisted companies and why multi-listed companies disclose more than single listed companies.

It has also been argued that increasing disclosure reduces the cost of capital (Choi, 1973; Foster, 1986; Diamond and Verrecchia, 1991; Lev, 1992 as cited in Hossain et al., 1994) and improves the market price of securities (e.g. Fisherman and Hagerty, 1989 as cited in Hossain et al., 1994). In addition, Firth (1980) found that companies increased their disclosure levels significantly when raising new stock market finance.

The Egyptian Stock Exchange is an emerging capital market which needs to attract foreign investors as well as Egyptian capital invested abroad. Therefore the Capital Market Authority mandated the IASs in order to increase the disclosure requirements and to increase investors' confidence (reduce information asymmetry, which in turn can reduce uncertainty) in listed companies financial reports (chapter 4).

As mentioned earlier, the Egyptian Stock Exchange had 700 listed companies in 1995. Of these only around 100 were traded. The rest were rarely traded but were listed to benefit from the tax exemption offered to listed companies in Egypt. The capital need theory is employed in this thesis to support the expectation that traded companies listed to raise capital through the Stock Exchange will disclose more than rarely traded companies.

In addition, public sector companies are issuing securities for privatisation. The capital need theory is employed to support the expectation that public sector companies (which are issuing securities) will disclose more than private sector companies (which are in most cases closed companies).

2.2.3 *Signalling theory*

Signalling theory addresses problems of information asymmetry in the markets. The theory shows how this asymmetry can be reduced by the party with more information signalling it to others. The theory of signalling was developed in the labour market, but signalling is a general phenomenon applicable in any market with information asymmetry (Morris, 1987).

Signalling theory, in the disclosure scenario, means that managers will disclose information which implies that the company has a share value which is larger than that assessed by the market, in order to encourage an upward revision of their stock prices. Managers will withhold information that implies values below the assessment of the market. These “silent” companies are identified by investors as companies with less-than-average valuation and, accordingly, their shares will be revalued downward. This downward price revision of non-disclosing companies will, in turn, encourage those within the group holding good news, relative to the recently decreased average valuation, to screen (signal) themselves out of the group by disclosing their information. The disclosure process thus proceeds, until the positions of all companies in the valuation hierarchy are identified (Lev and Penman, 1990).

Signalling theory in relation to disclosure in developing countries is discussed in section 2.3.3 and that in relation to disclosure in Egypt is discussed in section 2.4.

2.2.4 *Regulating disclosure*

Ross (1978) used the scenario of signalling to conclude that there is no need for laws legislating that information which must be disclosed, since managers have incentives to reveal information (cited in Lev and Penman, 1990).

Opponents of prescriptive regulation argue that managers have incentives to disclose information about their companies to differentiate themselves from poorly run companies (signalling theory). This incentive is considered to provide sufficient motives for voluntary disclosure so as to ensure a properly functioning securities' market (Dye, 1990).

In addition, in an unregulated economy, without mandatory disclosure requirements corporate financial statements will fulfil the function of reducing agency costs, and even in a regulated economy, the manager of a company still has the incentive to reduce agency costs (Watts, 1979). Publicly owned companies expend resources to release information to outside security holders on an almost continual basis, even in the absence of regulatory requirements to do so (Diamond, 1985).

Proponents of mandating disclosure argue that information about companies' financial conditions constitutes a public good, which will be under-provided without regulations. They also argue that if there is no regulation, companies will tend not to support the disclosure of unfavourable information (Dye, 1990).

Shaffer (1995) argued that the possibility of benefiting from mandatory disclosure requires a minimum of three conditions:

1. There must be a genuine economic problem to be resolved.
2. The perceived problem must be amenable to alleviation by greater disclosure.
3. There must be a basis for believing that requirements will succeed in increasing the overall amount of relevant information actually disclosed.

In developing countries prevailing cultural environment and economic problems lead to an expectation that the reliability of financial disclosures will not be high unless legal disclosure regulations are set (Jaggi, 1975). If the disclosure of information in these

countries is primarily left to individual companies supervised by the professional bodies, there appears to be a very small probability that this reliability can be improved. The intervention of governments through accounting and disclosure regulation may be essential to ensure higher reliability of financial disclosure, which is vital for the expansion of a developing country's capital market and industries (ibid.).

Egypt, as a developing country which has an emerging capital market, is closer to the approach that favours mandatory disclosure regulation (see chapter 3). In addition, the three aforementioned conditions suggested by Shaffer (1995) for benefiting from regulation are seen in Egypt in the early 1990's. The Egyptian Stock Exchange had been dormant for more than thirty years and was ineffective and illiquid. Disclosure by listed companies was poor. Therefore, the situation in 1991 required new regulations to revitalise the Stock Exchange because the market was not effective by itself. A new Capital Market Law was issued in 1992, which mandated the IASs in 1993.

In any capital market, the first and most important reason for any listed company to make accounting disclosure is to fulfil the requirements of regulations (El-Modahki, 1995, p.25). Accordingly, the following *a priori* expectation for hypothesis H1 (chapter 5) can be formed:

A significant increase of the extent of disclosure in the annual reports of Egyptian listed companies is taking place, which could be the result of the issuance of the new CML, which mandated the IASs.

2.2.5 *Cost of compliance and non-compliance in developing countries*

Previous research on developing countries (Abayo et al., 1993) discusses costs of non-compliance and costs of compliance. Non-compliance costs originate from two sources,

namely market pressures (from shareholders and other users) and government-imposed sanctions or administrative pressures. Compliance costs relate to training and updating knowledge of those applying the regulation.

In the Egyptian Stock Exchange, as an emerging market, the market pressures from shareholders and investors are not as strong as those found in developed markets. Many of the investors are small investors who cannot form pressure groups like their counterparts in developed countries. Also, for companies which are listed for tax exemption and so are rarely traded, there is virtually no market pressure from shareholders. During the period covered by this research, the employees of the CMA, as the supervisory body, were receiving training in the new regulations and the IASs, provided by one of the major international accounting firms. The CMA was using a basic disclosure checklist, which meant that it was possible for non-disclosure in matters of detail to escape the attention of the CMA staff.

During the 1990s, there have been extensive changes in Egypt in the regulations applying to business in general and to accounting in particular. These have required extensive training and updating for accountants. This implies relatively high costs of compliance.

Based on this discussion it can be said that for rarely traded companies non-compliance costs were not high compared with compliance costs. However, for frequently traded companies and for public sector companies, which have been listed for purposes of privatisation in the near future, market pressures were higher and so non-compliance costs were greater. This justifies studying the two groups of companies separately in the empirical part of the work. The following *a priori* expectation can be related to hypotheses H2 and H3

The level of compliance is less than 100% as non-compliance costs are not very high compared with compliance costs (related to H2). Actively traded companies will disclose more than rarely traded companies (related to H3).

2.3 Disclosure and developing countries generally and Egypt specifically

Developing countries are defined by Wallace (1990) as “an amorphous and heterogeneous group of countries mostly found in Africa, Asia, Latin America, the Middle East and Oceania....They have a future, but few have a past at least in an accounting context”. In developing countries, apart from the capital market forces, there are other forces which play an important role in the generation of reliable information. Culture is one of these forces. The purpose of this section is to summarise common characteristics of developing countries, previous disclosure studies in developing countries, applicability of disclosure theories to developing countries, relevant results from previous research in developing countries which can be used in either forming expectations or interpreting the results of current research, previous disclosure studies in Egypt and the necessity to subdivide the disclosure list and finally the IASs in relation to Egypt.

2.3.1 Common characteristics of developing countries

Developing countries have specific characteristics affecting accounting regulations, profession and practice, which make them different from developed countries. These characteristics do not exist in every country and the degree of difference varies between countries. Generally developing countries will have one or more of the following (SyCip, 1980):

- strong nationalism particularly in those which were formerly colonies;

- stock exchanges are young and even absent in some countries;
- need for foreign investment as a source of capital funds and new technologies; such countries offer numerous and attractive tax incentives;
- to a significant extent accounting practice and education are influenced by their previous colonising country;
- government laws and regulation have a great impact on the development of accounting practices;
- in some countries, particularly where informative financial reporting has not been thoroughly demanded because of the lack of a broadly investing public, the accounting profession is virtually non-existent and has taken little action to upgrade local accounting practices.
- lack of appreciation of the accounting function on the part of indigenous decision-makers, which hinders the development of accounting in these countries (Berry and Holzer, 1993).

Egypt as a developing country has shown evidence of some of these characteristics in the past. However, the situation is changing as Egypt is moving away from nationalisation to privatisation and revitalisation of its capital market and a market economy, as a promised route to economic development (see chapter 3). This gives Egypt some of the characteristics of developing countries but in the context of moving towards a western type of market economy.

2.3.2 Review of disclosure studies in developing countries

Appendix 2.2 contains a summary of the reviewed disclosure studies in developing countries. These studies are less in number and more recent compared with studies in

developed countries. Of the 13 studies reviewed in appendix 2.2, 11 studies have been carried out in the 1990s.

The reviewed studies were chosen because these are important to the current research as their main results have been used either in developing research questions for this thesis or in anticipating explanations for the research findings. The studies are also important in terms of supporting the research methods used in the current research. The studies were published in the period from 1968 to 1998. The studies covered 11 developing countries or emerging markets: India, South Africa, Mexico, Nigeria, Hong Kong, Tanzania, Malaysia, Jordan (2 studies), Bangladesh (2 studies), Zimbabwe and Saudi Arabia. All these studies used an index in measuring disclosure in the annual reports of a selected sample. The sample size ranged from 30 to 76 companies. Some of the studies covered mandatory disclosure only (e.g. Tai et al., 1990). Others covered voluntary disclosure only (e.g. Chow and Wong-Boren, 1987; Hossain et al., 1994). A third group of studies covered both mandatory and voluntary disclosure (e.g. Wallace, 1987; El-Modahki, 1995 and Nicholls and Ahmed, 1995). One study (Abayo et al., 1993) covered four measures of disclosure quality:

- Mandatory disclosure
- Voluntary disclosure
- Timeliness of the reports
- Type of audit opinion received

2.3.3 *Applicability of disclosure theories to developing countries*

Disclosure theories have been developed by researchers in relation to companies and markets in western developed economies, which have environmental factors different from the characteristics of developing countries indicated in section 2.3.1. This means

that those theories might not apply entirely or might apply in a different way in developing countries.

A summary of the applicability of disclosure theories in emerging or developing countries' capital markets may be taken from the disclosure studies in developing countries, reviewed in section 2.3.2.

The disclosure theories discussed in section 2.2 originated in western countries and have been based upon the hypothesis of an efficient capital market. These theories have been used to explain the results of a number of disclosure studies in developing countries (appendix 2.2).

From the results of these studies it seems that agency theory and capital needs theories as reflected by size of companies are applicable to some extent to the companies surveyed. However, it is not as strong as in studies on developed countries (appendix 2.3). Out of the nine companies surveyed, in six cases a significant positive relationship was found between size and disclosure. However, in two of them association was weak. In the remaining three cases no relationship was found.

On the other hand, gearing, as a proxy for contracting and monitoring costs of lending agreements, did not appear to be associated with disclosure practices in developing countries. In the three studies which investigated gearing in relation to disclosure (appendix 2.2), no significant association was found.

Capital needs theory was commonly tested in disclosure studies in developed countries (appendix 2.3) using a variable which differentiates between unlisted versus listed and single listed versus multilisted companies. This kind of investigation was used in one of

the disclosure studies in developing countries (Hossain et al., 1994). In the study significant association between disclosure and listing status was found.

Signalling theory may be reflected by the relationship between disclosure and performance-related variables (e.g. liquidity and profitability and gearing). From the surveyed studies (appendix 2.2) it seems that in emerging capital markets and markets in developing countries, signalling theory is far less obvious as an explanation of disclosure practices. This might be for one of several reasons, e.g. investors may be less sophisticated or data on companies might not be readily available. The lack of prompt data may open ways to speculation. Out of three studies which investigated association between profitability and disclosure, in two cases no association was found and in one case positive association was found. In addition, in two studies which investigated association between liquidity and disclosure no significant association was found.

From the results of these studies a tentative conclusion on the applicability of these theories to developing countries can be drawn that both theoretical models of agency and capital needs appear to be applicable to the findings of developing countries studies, but the applicability of signalling theory is not clear. This conclusion can be used to form expectations on the situation of Egypt as a developing country in section 2.4.

2.3.4 Other relevant results from prior disclosure studies in developing countries

The following matters are noted from previous research into accounting disclosure in developing countries as issues, which may have particular interest for interpreting the results of this study.

- Lack of compliance with mandatory disclosure provisions may have reduced the credibility of corporate annual reports and may have resulted in loss of potential foreign investment (e.g. Abayo et al., 1993; Nicholls and Ahmed, 1995).
- Low levels of mandatory disclosure suggest that accounting professions and regulatory bodies in those countries are less effective in monitoring and enforcing statutory disclosure (ibid.).
- The low level of mandatory disclosure is a consequence of the low cost of non-compliance (because of the lack of effective regulatory bodies, or professional organisations and lack of an effective capital market) compared with a high cost of compliance (employing professionally qualified accountants, offering training courses and updating staff knowledge) (Abayo et al., 1993).
- Timeliness of the annual reports in developing countries has to be tested because of the lack of effectiveness of regulatory bodies and professional organisations (ibid.).
- Lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements and / or lack of proficiency of staff (Tai et al., 1990).

These results are applied later in this thesis in a variety of ways including support for hypotheses and interpreting results.

2.3.5 Previous disclosure research on Egypt and the necessity to subdivide disclosure index

Previous disclosure studies in Egypt have either been theoretical in nature (e.g. El-Naghi; 1993, Elhalawani, 1993; El Tibi, 1993) or made on public sector companies only (e.g. Rezkalla, 1993). This was mainly because of the difficulty in collecting data on private sector companies. In one of the very few empirical studies on Egyptian investors, it was suggested that they are more interested in the profit figure than any of the other ratios.

This might be because most of the investors are small and unsophisticated investors (Elsadik, 1990). It is often argued that small investors have little incentive to acquire information relevant to the valuation of securities (Lorie and Hamilton, 1973 as cited in Watts, 1979). In another study (Tawfic, 1991) it was found that disclosure of notes by Egyptian companies was very rare at that time.

Therefore, it can be expected that companies will vary in disclosure in the different parts of the annual report. In particular, disclosure levels will be higher in the income statement than other parts of the annual report. In addition, it can be expected that disclosure of notes might be lower than other parts of the annual report.

The following expectation can be formed from the discussion:

More insights and explanation of disclosure practices by Egyptian listed companies can be gained by subdividing the disclosure indices based on the annual report into its different parts and according to language and date of the regulations (see chapter 5 for sub-division).

2.3.6 Cultural dimensions

The term 'culture' is defined by Kluckhohn (1951, p.86) as "The distinctive way of life of a group of people, their complete design for living" (cited in Jaggi, 1975).

2.3.6.1 Developing countries' position in Gray's accounting values model and the expected effect on disclosure

Developing countries generally and Arab countries including Egypt were presented in the cultural dimensions of Hofstede (1980) as countries with strong uncertainty avoidance, large power distance and collectivism. Hofstede's cultural dimensions were linked to

accounting values by Gray (1988). In relation to disclosure, developing countries' cultural dimensions are strongly related to secrecy. *"A preference to secrecy is consistent with strong uncertainty avoidance following from a need to restrict information disclosures so as to avoid conflict and competition and to preserve security. A close relationship with power distance also seems likely in that high power-distance societies are likely to be characterized by the restriction of information to preserve power inequalities. Secrecy is also consistent with a preference for collectivism, as opposed to individualism, with its concern for those closely involved with the firm rather than external parties"*(*ibid.*)

Gray's reference to those closely involved with the firm may be equated with those who have a particularistic value orientation.

2.3.6.2 Value orientation

Research findings in social sciences demonstrate that a model value orientation of individuals is to a great extent the product of the cultural environment of a given society (Jaggi, 1975).

The term 'value orientation' is used in the sense of a selective orientation toward experience implying deep commitment, which influences the order of choices between possible alternatives in action (Kluckhohn, 1961, cited in Jaggi, 1975).

There is a theoretical model which indicates that managers' value orientations are expected to influence disclosure decisions. Managers with universalistic value orientation are likely to be deeply committed to disclosing relatively more and better quality information compared with those with a particularistic value orientation (Jaggi, 1975).

This leads to the formation of prior expectation that, in the case of Egypt, companies which are listed in the Stock Exchange with the intention to collect capital through securities (actively traded companies, see chapter 3 for more detail) are likely to have universalistically-oriented managers. Such managers are supposed to be “*impersonal in their relations, to believe in the value of competition to be loyal to the firm and not any particular group, and to recognise their obligations to society*” (Jaggi, 1975, p.81).

On the other hand, Egyptian companies which are rarely traded are likely to have particularistic value-oriented managers. This is because most of these companies are joint stock in name only but in practice are closed companies (see chapter 3 for more detail). Managers of this type are likely not to “*realize their obligation to outsiders or to society. Instead, their obligations will primarily relate to family members owning and managing the firm*” (ibid.). As a result, they are not likely to feel obliged to disclose any good quality information in financial statements primarily intended for outsiders. The owners will be able to obtain information informally.

From this brief discussion the following *a priori* expectation can be drawn in support of hypothesis H3:

In the Egyptian Stock Exchange actively traded companies produce better quality disclosure in their annual reports than rarely traded companies.

2.3.7 IASs disclosure and Egypt; familiarity and language effect

As explained earlier, the Egyptian Capital Market was dormant for thirty years. In the early 1990s, as a part of its privatisation programme agreed with the IMF and the World Bank, the Egyptian government decided to revitalise its capital market by improving its reputation and the confidence of investors. A special interest has been to attract back the

Egyptian capital invested abroad as well as to raise new foreign capital. Therefore, a new CML was issued which mandated the IASs by its ERs in 1993. The IASs became fully mandatory in 1995.

This meant that Egyptian listed companies have to follow the Companies Act of 1981, the Capital Market Law of 1993 and the IASs.

As a result of the British influence on the Egyptian CA and the IASs, some similarities existed between the provisions of both. This means that the familiarity with those parts of the IASs which are included in the established regulation (CA) will be higher than with other parts. In a study on Hong-Kong (Tai et al., 1990) it was found that lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements.

From this discussion, an expectation in the case of Egypt is that *familiarity with the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the established regulations will be higher than other parts* (Hypothesis 2).

In addition, the IASs are officially issued in English. The main language in Egypt is Arabic. Several auditors have expressed concerns about the lack of an official Arabic translation of the IASs in Egypt (see chapter 4). Part of the IASs was included in the Arabic national regulations (CA and CML) while other parts were not included.

Therefore, an expectation in the case of Egypt is that *language of the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the national regulations in Arabic will be higher than other parts* (hypothesis 2).

2.4 Company characteristics (explanatory variables), theory justification and prior expectation in relation to Egypt

Several company characteristics have been tested in previous disclosure research. Company size, followed by listing status have proved to be the most significant variables in relation to disclosure. For other variables, the results were not always the same.

The following is a list of variables which have been used most frequently in previous research. These variables have been chosen to be tested again in this research using univariate and multivariate analysis, as explained in Chapters 6, 8 and 9.

This research applies the approach of a one-tail test of a hypothesis where the prior expectation is strong based on analysis of theory and the findings of previous work. A two-tail test is applied where the prior expectation is less strong. This section explains the variables which have been used most frequently in previous research. For each variable, there is a discussion of relevant theory and previous research leading a statement of prior expectation for that particular characteristic (expectation of hypothesis H3).

2.4.1 *Size*

Size can be measured in a number of different ways and there is no overriding theoretical reason to select one rather than the other. However, one size variable may be applicable to a particular country but may not be relevant to another country. In this research, size is measured by two variables, total sales, and total assets, as this information was available in all annual reports.

2.4.1.1 *Discussion of theory*

Size is considered to be an important determinant of disclosure level. It is a comprehensive variable, which can proxy a number of corporate attributes such as competitive advantage, information production costs, and political costs (Hossain et al., 1994). In other words, it is a reflection of agency theory (e.g. a larger number of shareholders and debt-holders), capital need theory (more likely to collect capital from outsiders) and political costs (in the public eye).

Many reasons have been advanced in the literature in an attempt to justify this relationship on *a priori* grounds.

First, the accumulation and dissemination of information is costly. Smaller companies may not possess the necessary resources for collecting and presenting an extensive array of information (Buzby, 1975, p.18). On the other hand, large companies are quite likely to collect the information needed for corporate report disclosure for their internal management system and thus little extra cost may be incurred (Firth, 1979a, p.273). In other words, there may be a fixed component to disclosure cost, so that the cost per unit of size decreases (Lang and Lundholm, 1993). In addition, the cost of disseminating disclosure may be higher for smaller companies because the news media are more likely to carry stories about large firms and analysts are more likely to attend their meetings (ibid.)

Second, large companies are more in need of external funds; therefore, there will be more potential conflicts among owners, creditors, and managers. Jensen and Meckling (1976) contend that agency costs increase with the increase of outside capital. Information disclosure may be used to decrease agency costs (Chow and Wong-Boren, 1987), to

reduce information asymmetries between the company and the providers of outside funds (Inchausti, 1997, p.53) and to create or maintain strong demand for their securities.

Third, smaller companies may feel that fuller disclosure of their affairs will put them at a competitive disadvantage with larger companies in their industry (Buzby, 1975).

Fourth, larger companies tend to be more in the public eye and attract more interest from the governmental bodies and are subject to political costs. Therefore, they may disclose more thinking that this will allay public criticism or governmental intervention in their affairs and will enhance their corporate reputation and public image (Raffournier, 1995.).

2.4.1.2 *Discussion of previous research and a priori expectation in the case of Egypt*

A large number of previous research studies investigated the relationship between size and disclosure e.g. Cerf (1961), Singhvi and Desai (1971), Buzby (1975), Stanga (1976), Belkaoui and Kahl (1978), Firth (1979a), Chow and Wong-Boren (1987), Salamon and Dhaliwal (1980), Cooke (1989a, 1991 and 1992), Malone et al. (1993), McKinnon and Dalimunthe (1993), Ahmed and Nicholls (1994), Ng and Koh (1994) and Wallace et al. (1994), Hossain et al (1994), Raffournier (1995), Wallace and Naser (1995). Evidence from previous research provides overwhelming support for the hypothesis that there is a significant positive relationship between company size and levels of disclosure. The theory and evidence reviewed so far suggest the following expectation:

The level of disclosure in the annual reports of Egyptian listed companies is positively related to a company's size (total sales and total assets).

2.4.2 *Gearing*

Gearing is measured as total long-term debt as a ratio to equity at the end of the year. Lang and Lundholm (1993), Malone et al. (1993), McKinnon and Dalimunthe (1993), Ng and Koh (1994), Schadewitz (1994), and Wallace et al. (1994) previously used the same ratio.

2.4.2.1 *Discussion of theory*

Gearing is a proxy for the financial risk of the company. The higher the gearing, the higher the financial risk of the company and the higher the expected extent of disclosure (Patton and Zelenka, 1997). In addition, gearing is a proxy for contracting and monitoring costs of lending agreements (Holthausen and Leftwich, 1983). A highly geared company has a greater obligation to satisfy the needs of long-term creditors for information (Wallace et al., 1994). A potential transfer of wealth from bondholders to shareholders is likely in highly geared companies (Myers, 1977). Therefore, agency costs increase because of the increases in monitoring costs (Jensen and Meckling, 1976). Management of these companies may increase voluntary disclosure in their financial reports for monitoring purposes (ibid.). Therefore, it can be said that agency theory predicts that the level of voluntary disclosure increases as the gearing of the company grows to avoid agency costs (Hossain et al., 1994).

2.4.2.2 *Discussion of previous research and a priori expectation in the case of Egypt*

Although it was hypothesised by some of the above mentioned studies that highly geared companies tend to disclose more to satisfy the needs of creditors, the results of previous empirical research on this hypothesis are contradictory. Belkaoui and Kahl (1978)

observed a significant negative association, while Bradbury (1992) found a positive association. On the other hand, Chow and Wong-Boren (1987) and Ahmed and Nicholls (1994) found no significant association. Previous research generally and research in developing countries specifically (section 2.3.6 and 2.3.7) suggest forming the following expectation:

There is a significant association between the level of disclosure of Egyptian listed companies and gearing.

2.4.3 *Profit ratio*

Profit ratio is measured as the ratio of pre-tax profit to shareholders' equity at the balance sheet date.

2.4.3.1 *Discussion of theory*

Agency theory suggests that managers of companies with higher profits are motivated to disclose more information to support the continuance of their positions and boost their compensation (Singhvi and Desai, 1971).

Political process theory suggests that companies with large profits will be interested in disclosing more information in order to justify the level of profits (Inchausti, 1997).

Signalling theory implies that companies which have good news will signal this to the market to avoid under-evaluation of their shares (ibid.). However, companies with bad news might choose to disclose it on time to reduce the risk of legal liability and severe share devaluation and loss of reputation (Skinner, 1994). In other words, signalling theory might suggest two contradictory signs of the relationships between profitability and disclosure of information.

2.4.3.2 *Discussion of previous research and a priori expectation in the case of Egypt*

A large number of studies tested profitability in relation to disclosure levels such as: Alford et al. (1993), Malone et al. (1993), Ng and Koh (1994), Wallace et al. (1994) and Raffournier (1995). Cowen et al. (1987) found return on equity linked to level of disclosure. Raffournier (1995) noted that the hypothesis of positive association between disclosure and profitability has not been strongly supported in previous research. In addition, Lang and Lundholm (1993) noted that both theoretical and empirical literatures are ambiguous concerning the effect of performance on disclosure (cited in Patton and Zelenka, 1997). The theory and evidence reviewed so far suggest the following:

Although it is expected that performance will affect the extent of disclosure in the annual reports of Egyptian listed companies, the 'sign' of the effect is not strictly determined. There is a significant association between the level of disclosure of Egyptian listed companies and profit ratio.

If no association was found, then the applicability of signalling theory will not be supported.

2.4.4 *Liquidity*

Liquidity is measured as the ratio of current assets (after deducting inventory) to current liabilities.

2.4.4.1 *Discussion of theory*

The ability of a company to meet its short-term financial obligation without having to liquidate its long term assets or cease operations is an important factor in the evaluation of

the company by interested parties such as investors, lenders and regulatory authorities (Wallace and Naser, 1995). According to signalling theory, companies with a high liquidity ratio will disclose more in order to distinguish themselves from other companies (Belkaoui and Kahl, 1978). However, according to agency theory, companies with a low liquidity ratio might disclose more in order to satisfy the needs of shareholders and creditors (empirical evidence of this argument was found in Spain, Wallace et al., 1994).

2.4.4.2 *Discussion of previous research and a priori expectation in the case of Egypt*

Several studies have tested the relationship between liquidity and level of disclosure. However, the results are contradictory: e.g. Belkaoui and Kahl (1978) suggested that Canadian companies with high liquidity ratio will present more disclosure. On the other hand, Wallace et al. (1994) found that Spanish companies with a low liquidity ratio present more mandatory disclosure. Wallace and Naser (1995) and Owusu-Ansah (1998) found no significant association between liquidity and levels of mandatory disclosure.

Previous research generally and research in developing countries specifically (appendices 2.2 and 2.3) suggest forming the following tentative expectation:

There is a significant association between the level of disclosure of Egyptian listed companies and liquidity.

If no association was found, then the applicability of signalling theory will not be supported.

2.4.5 *Legal form*

According to legal form, there are two types of companies listed in the Stock Exchange: public sector companies and private sector companies.

2.4.5.1 *Discussion of theory*

Legal form in this research is a reflection to (proxy of) three other variables, which are size (agency theory), political sensitivity (political costs), and security issuance (capital need). Public sector companies are among the largest companies which are listed in the Stock Exchange for the purpose of privatisation. Therefore, these companies intend to issue securities in the near future. Private sector companies are less likely to issue securities in the near future, as public sector companies are more popular to investors. In addition, public sector companies are intensively in the public eye as the government and international agency regularly evaluate the privatisation programme.

2.4.5.2 *Discussion of previous research and a priori expectation in the case of Egypt*

Several previous studies have suggested that companies which plan to issue securities in the near future increase disclosure (e.g. Gibbins et al., 1990; Leland and Pyle, 1977; Myers and Majluf, 1984; Merton, 1987; Fisherman and Hegarty, 1989; Ruland et al., 1990; Frankel et al., 1992 as cited in Lang and Lundholm, 1993). In addition all the previously mentioned theoretical discussions on size and capital need apply to public sector companies. Previous research generally and research in developing countries specifically (section 2.3.6 and 2.3.7) suggest forming the following expectation:

There is a significant association between the level of disclosure of Egyptian listed companies and legal form. It is expected that public sector companies will disclose more than private sector companies.

2.4.6 *Share trading*

According to share trading, there are two types of companies in the Egyptian Stock Exchange: traded companies and rarely traded companies.

2.4.6.1 *Discussion of theory*

The variable is a reflection of capital need theory. In the Egyptian Stock Exchange, it is very important to compare those companies whose shares are traded with those which are not or rarely traded. This is because of a unique characteristic of the Egyptian Stock Exchange. In 1995, it had 700 listed companies. From these only 100 were traded. The rest were rarely traded and in most cases were closed companies (more detail in Chapters 3 and 6). It is assumed that actively traded companies listed in the Egyptian Stock Exchange to collect capital are likely to have universalistic-oriented managers, while rarely traded companies are listed for the tax exemption offered to listed companies and are likely to have particularistic-oriented managers (see section 2.3.6.2).

2.4.6.2 *Discussion of previous research and a priori expectation in the case of Egypt*

Many previous studies have looked at the influence of listing status, or multi-listing, on the level of disclosure. Examples of these studies are Meek and Gray (1989), Bindon et al. (1995), Schadewitz (1994), Malone et al. (1993), Hossain et al. (1994), Frost and Pownall (1994), Cooke (1989a, 1991, and 1993) and Bradbury (1992). Multi-listing

could not be tested for Egyptian companies at this early stage because only a very few Egyptian listed companies were multi-listed at the time of the study.

Using the frequency of share trading as an independent variable may be related to previous work such as that of Wallace and Naser (1995) who used as a variable the 'proportion of shares held by outsiders'. It might be assumed that companies whose shares are actively traded would have a larger body of shareholders than those which are rarely traded. Wallace and Naser (1995) suggest that the greater the number of people who need to know about the affairs of a company, the greater will be the amount of disclosure. The theory and evidence reviewed so far suggest the following expectation:

Disclosure in the annual reports of Egyptian listed companies is positively related to share trading. Traded companies are expected to disclose more than rarely traded companies.

2.4.7 Audit firm

According to audit firm there are two groups of companies. The first group comprises the companies which are audited by one of the big six. The second group consists of companies which are audited by other types of audit firm.

2.4.7.1 Discussion of theory

The audit firm of a company can influence significantly the amount of information disclosed in the annual report (Ahmed and Nicholls, 1994) to reduce the agency costs borne by principals and agents (Watts and Zimmerman, 1986). Auditing firms may use the information disclosed by their clients as a way of signalling about their own quality (Inchausti, 1997).

Using these theoretical arguments, it can be argued that large audit firms have high reputation capital at stake. Consequently, they might insist that their clients comply with regulations and thus strengthen their audit reputation (Dumontier and Raffournier, 1998).

2.4.7.2 *Discussion of previous research and a priori expectation in the case of Egypt*

The size of audit firm was tested as an independent variable by many studies such as: Firth (1979a), Robbins and Austin (1986), Malone et al. (1993), Ahmed and Nicholls (1994), Hossain et al. (1994), Ng and Koh (1994), Wallace et al. (1994) and Raffournier (1995).

The results of the empirical tests are contradictory; for instance Malone et al., (1993) found no significant statistical relationship between financial disclosure and type of audit firm, while Craswell and Taylor (1992) found a statistically significant relationship.

In Egypt, the audit profession and auditor independence have been well regulated since the 1950s. The argument that large audit firms are more independent, stricter with their clients and more sensitive to their reputation than small audit firms, can apply to large local and international firms.

However, since the IASs were only recently mandated in Egypt by the ERs of the CML, there was previously no great interest in the IASs. Therefore, it is expected that major audit firms with an international relationship ('big six') will be more knowledgeable of the IASs because of their superior training and their international relations. Therefore, it might be more convenient to the situation in Egypt to expect that:

There is a significant association between the level of IASs disclosure of Egyptian listed companies and the type of audit firm. Companies audited by international firms are

expected to disclose more in respect of the IASs issues which are not available in local regulations than companies audited by other firms.

2.4.8 *Type of business activity*

According to type of business activity, there are two groups of companies. The first group comprises the companies which are industrial. The second group consists of companies which are not industrial.

2.4.8.1 *Discussion of theory*

Disclosure in the annual reports of different companies may not be identical throughout sectors of the economy. The effect of type of business activity may be justified using signalling theory or political costs. Watts and Zimmerman (1986) suggest industry membership probably affects the political vulnerability of a company. However, in their opinion, company size proxies for type of business activity, because companies within a specific type of activity have similar sizes. Therefore it has been considered convenient to include the type of business activity variable in order to separate this factor from the size variable (Inchausti, 1997). In addition, if a company does not adopt the same corporate reporting strategy as others from the same activity, it could be interpreted by the market as “bad news” (ibid.). Voluntary disclosure by some companies seems to provoke other companies to make related disclosure (Dye and Sridhar, 1995). Cooke (1991) argued that “*the existence of a dominant firm with a high level of disclosure in a particular industry may have a bandwagon effect on levels of disclosure adopted by other firms in the same industry*”.

2.4.8.2 *Discussion of previous research and a priori expectation in the case of Egypt*

The link between type of business activity and levels of disclosure has been tested in many previous studies, for example: Cowen et al. (1987), Cooke (1991 and 1992), Alford et al. (1993), Malone et al. (1993) and Raffournier (1995). The results of testing the relation between industry type and levels of disclosure did not always agree. Stanga (1976) and El-Modahki (1995) found the industry type to be a significant factor affecting accounting disclosure. In addition, Cooke (1989 and 1991) found that industrial companies disclose more than non-industrial companies. However, Wallace et al. (1994) did not find any association between mandatory disclosure and industry type in Spain.

In Egypt, all companies, whether industrial or non-industrial, are subject to the same disclosure requirements. In addition, previous research did not always agree. Therefore, no specific sign of the relationship between disclosure and type of business activity is expected.

The theory and evidence reviewed so far suggest the following expectation:

There is a significant association between the level of disclosure of Egyptian listed companies and type of business activity.

2.5 Summary and conclusion

There are different theories which have been employed in the accounting literature to explain disclosure practices in many countries. This chapter has summarised the most common theories: agency theory, capital need theory and signalling theory. In the context of these theories, related issues have been discussed including: regulating disclosure and

costs of compliance compared with costs of non-compliance. From the discussion, expectation for hypothesis H1 was formed (section.2.2.4).

As the thesis is concerned with Egypt, which is a developing country, the chapter has discussed a number of issues which affect disclosure in developing countries generally and Egypt specifically. The common characteristics of developing countries, previous disclosure studies in developing countries, applicability of disclosure theories to developing countries, relevant results from previous research in developing countries, previous disclosure studies in Egypt and the IASs disclosure requirements in relation to Egypt are all discussed. From that discussion *a priori* expectations for various parts of hypotheses H2 and H3 were formed (sections 2.1.5, 2.1.6 and 2.1.7).

In section 2.3 a summary of characteristics of developing countries was presented. These characteristics lead to doubts in relation to the applicability of disclosure theories which originated in the Western developed countries. Egypt as a developing country has shown some evidence of some of these characteristics in the past. However, the situation is changing as Egypt is moving towards a market economy and trying to revitalise its capital market. These circumstances made it interesting to investigate a country like Egypt in this transition period as it has been noted that there is a lack of information on *de facto* accounting practices in developing countries (Nobes, 1998).

Disclosure practices in a country like Egypt will be influenced by the past (for instance, the large number of closed companies which prefer bank loans to raising capital on the stock exchange, and with managers having a particularistic orientation). At the same time, disclosure practices in Egypt will reflect the new economic policy of privatisation, in terms of having large public sector companies listed in the Stock Exchange to be privatised. These companies are issuing shares to the public to increase the ownership

base. Activities of the Stock Exchange have increased sharply since 1992 and the market was considered in the list of emerging markets in 1997 (ESIS, 1997).

In order to investigate the position of Egypt in terms of disclosure theories there was a discussion in section 2.4 of a number of company characteristics, their justification in terms of theory and *a priori* expectation in relation to Egypt. Some of these characteristics were chosen from previous research, namely: company size, profitability, gearing, liquidity, type of business activity, type of audit firm. Disclosure theories and prior research have been used to form *a priori* expectations for these. Two additional variables which are specifically relevant to Egypt have been suggested for investigation. These variables are share trading and legal form of a company. Adaptation of capital need theory was used in forming *a priori* expectations for these two.

As an attempt to internationalise the capital market, the Egyptian Authorities issued new regulations (CML) which mandated the IASs, offering the potential to research new issues. These issues include that of familiarity with this new international regulation (IASs) and that of language effect, as some parts of the regulations were not available in Arabic.

A summary of the *a priori* expectation for each hypothesis and the relevant theoretical consideration is set out in table 2.1.

Table 2. 1Summary of *a priori* expectations.

Hypothesis	Prior Expectations	Theoretical considerations
H1	A significant increase of the extent of disclosure in the annual reports of Egyptian listed companies is taking place, which could be the result of the issuance of the new CML, which mandated the IASs.	<ul style="list-style-type: none"> • Prescriptive regulatory approach versus free market approach
H2	<ul style="list-style-type: none"> • The level of compliance is less than 100% as non-compliance costs are not very high compared with compliance costs (part 1 of H2). • More insights and explanation of disclosure practices by Egyptian listed companies can be gained by subdividing the disclosure indices of the annual report according to its different parts (section 2.3.5). • Familiarity with the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the established regulations will be higher than that of other parts • Language of the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the national regulations in Arabic will be higher than that of other parts. 	<ul style="list-style-type: none"> • Compliance costs compared to non-compliance costs • Strength of users' interest in earnings information • Corporate reporting culture of not disclosing notes to accounts. • No established theory covering this factor • Derived from situation of Egypt • No established theory covering this factor • Derived from situation of Egypt

H3	<ul style="list-style-type: none"> • The level of disclosure in the annual reports of Egyptian listed companies is positively related to a company's size (total sales and total assets). • There is a significant positive association between the level of disclosure of Egyptian listed companies and share trading. Actively traded companies will disclose more than rarely traded companies. • There is a significant positive association between the level of disclosure of Egyptian listed companies and legal form. Public sector companies will disclose more than private sector companies. • There is a significant positive association between the IASs disclosure of Egyptian listed companies and the type of audit firm. Companies audited by one of the 'big-six' will disclose more in terms of IASs requirements than companies audited by other audit firms. • There is a significant association between the levels of disclosure other than the IASs, of Egyptian listed companies and audit firm. • There is a significant association between the level of disclosure of Egyptian listed companies and gearing. • There is a significant association between the level of disclosure of Egyptian listed companies and liquidity. • There is a significant association between the level of disclosure of Egyptian listed companies and profit ratio • There is a significant association between the level of disclosure of Egyptian listed companies and type of business activity. 	<ul style="list-style-type: none"> • Primarily agency theory but could also involve capital need • Adaptation of capital need theory to suit Egypt. • Capital need theory and political costs. • No established theory covers familiarity with the regulations. This is derived from the situation of Egypt. • Signalling and agency theories (section 2.4.7.1) • Agency theory • Signalling theory • Signalling theory • Political costs and "follow the leader" approach.
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Appendix 2.1 Previous relevant disclosure studies

Appendix 2.1 summarises examples of different types of disclosure studies. One group of studies examined disclosure within one country (appendix 2.1, columns C1 and C2); a second group considered specific disclosure e.g. segmental disclosure, environmental disclosure or disclosure in a specific industry either within one country or across countries (appendix 2.1, C3); while a third group examined selected disclosure across countries (appendix 2.1, C4);

Columns C1 and C2 outline the studies which are particularly relevant to this research. These are reviewed and summarised later in the chapter in appendices 2.2 and 2.3. Appendix 2.2 contains a summary of previous studies in developing countries.

Appendix 2.1 Selected disclosure studies

General disclosure one country studies			Specific disclosure (C3)					Across countries studies (C4)
Developed countries (C1)		Developing countries (C2)		Segmental disclosure	Environmental and social disclosure	Gas and oil industry	Interim reports	
Cerf (1961) Singhvi and Desai (1971) Buzby (1975) Belkaoui and Kahl (1978) Firth (1979a) Firth (1979b) McNally et al. (1982) Cooke (1989b) Cooke (1991) Cooke (1992) Cooke (1993) Wallace et al. (1994) Wallace and Naser (1995) Inchausti (1997) Dumontier and Raffournier (1998) Cooke (1998)	USA USA USA Canada UK UK New Zealand Sweden Japan Japan Japan Spain Hong Kong Spain Switzerland Review paper	Singhvi (1968) Firer and Meth (1986) Chow and Wong- Boren (1987) Wallace (1987) Tai et al. (1990) Abayo et al. (1993) Hossain et al. (1994) Solas (1994) Ahmed and Nicholls (1994) Nicholls and Ahmed (1995) El-Modahki (1995) Khasharmeh (1995) Owusu-Ansah (1998)	India South Africa Mexico Nigeria Hong-Kong Tanzania Malaysia Jordan Bangladesh Bangladesh Saudi Arabia Jordan Zimbabwe	Salamon and Dhaliwal. (1980) Bradbury (1992) McKinnon and Dalimunth (1993) Bindon et al. (1995)	Cowen et al. (1987) Fekrat et al. (1996) Christopher and Hutom (1996) Gray et al. (1998)	Malone et al. (1993) Craswell and Taylor (1992)	Schadewitz (1994) Leftwich et al., (1981)	Barrett (1976) Belkaoui (1990) Alford et al. (1993) Belkaoui (1994) Frost and Pownall (1994) Bindon et al. (1995) Gray et al. (1995) Meek et al. (1995)
Useful in terms of research methods		Relevant and important in terms of generating research questions		not applicable to this study				

Note: There are a number of studies which discussed disclosure in Egypt. These studies have not included empirical work in most cases (section 2.3.5)

Appendix 2.2 Summary of reviewed disclosure studies in developing countries

Study and year	Country	Companies tested and annual reports tested	Disclosure list	Independent variables	results
Singhvi (1968)	India	45 listed industrial companies	Cerf's (1961) index was adopted after omitting 3 items (irrelevant) of his study and adding 6 new items	<ul style="list-style-type: none"> • asset size • rate of return • earning margin • CA firms • type of management • number of stockholders 	<p>Fluctuations in securities prices are higher for those companies which disclose inadequate information to their investors.</p> <p>Companies which disclose inadequate information in their annual reports are likely to be:</p> <ul style="list-style-type: none"> • small in size • less profitable • audited by any CA firm • managed by Indian management
Firer and Meth (1986)	South Africa	36 listed manufacturing companies	49 voluntary disclosure items chosen from previous research. The mean of the weighting of investment analysts and financial directors of 200 industrial firms was used.	not tested	<ul style="list-style-type: none"> • Investment analysts considered all items relevant to their decision. • Relatively high importance was given to predictive and foreign currency information and less importance was given to inflation related items. • Information requirements of UK investors are different from their South African counterpart. • Good correlation was found between the views of preparers and users of annual reports. • Higher correlation was found between actual levels of disclosure and financial directors' ranking than financial analysts' ranking. • Low level of voluntary disclosure was found.

Chow and Wong-Boren (1987)	Mexico	52 listed non-financial companies	24 voluntary disclosure items chosen from <ul style="list-style-type: none"> • prior research • announcements of the authorities • Mexican text books after elimination of mandatory and irrelevant items two scores were calculated one weighted and the other unweighted.	<ul style="list-style-type: none"> • size • financial leverage • proportion of "asset in place" 	<ul style="list-style-type: none"> • Positive association between disclosure and firm size • No association between disclosure and either leverage or "asset in place" • Significant positive correlation was found between weighted and unweighted scores.
Wallace (1987)	Nigeria	47 companies traded on the floor of the Nigerian Stock Exchange	185 disclosure items	<ul style="list-style-type: none"> • assets • sales • no of shareholders • profitability • liquidity • management type • business type • country of origin of the multinationals 	<ul style="list-style-type: none"> • Weak positive correlation between overall disclosure and firm size • No correlation between disclosure and other variables.
Tai et al. (1990)	Hong Kong	76 listed companies	a list of mandatory disclosure items provided by a local office of one of the 'big-eight'	<ul style="list-style-type: none"> • size • type of business • audit firm size 	<ul style="list-style-type: none"> • A major departure of mandatory disclosure requirements • Large and small size companies had fewer departure than medium size one • No significant relationship between non compliance and either type of business or audit firm type

Abayo et al. (1993)	Tanzania	51 Tanzanian firms	four measures of disclosure quality <ul style="list-style-type: none"> • mandatory disclosure • voluntary disclosure • timeliness of the annual reports • type of audit opinion 	not tested	<ul style="list-style-type: none"> • Quality of disclosure is very low • All sampled companies at least disclosed some voluntary disclosure • Significant but weak association between mandatory and voluntary disclosure • No significant association between both disclosure scores and timeliness • Significant but fairly weak association between timeliness and type of audit opinion.
Hossain et al. (1994)	Malaysia	67 non-financial firms listed on Kuala Lumpur SE, 12 of them are multi-listed on London SE.	a list of 78 voluntary disclosure items chosen from prior research after an elimination of mandatory and irrelevant items	<ul style="list-style-type: none"> • firm size • leverage • ownership structure • proportion of assets in place • auditor type • foreign listing 	<ul style="list-style-type: none"> • firm size, ownership structure and foreign listing status were significantly related to voluntary disclosure. The strongest was size.
Solas (1994)	Jordan	45 manufacturing and service companies	a disclosure list of 31 items based on IAS 1 + IAS 5. The items were weighted	<ul style="list-style-type: none"> • asset size • no. of shareholders • rate of return • earning margin 	<p>Level of disclosure was not acceptable in terms of IAS1 and 5</p> <p>No relationship found between disclosure and any of the tested company characteristics</p>
Ahmed and Nicholls (1994)	Bangladesh	Annual reports of 63 Bangladeshi companies	94 items adapted from Cooke (1989a)	<ul style="list-style-type: none"> • size • debt • multinational company influence • professional qualification of accountants • audit firm size 	<ul style="list-style-type: none"> • None of the sampled companies have complied with the whole mandatory requirements. • Significant positive association between disclosure and audit firm size and subsidiaries of multinational companies. • Significant positive but weaker association between disclosure and size.

Nicholls and Ahmed (1995)	Bangladesh	63 annual reports of listed industrial companies	disclosure list of 87 items constructed from previous literature, regulations (48 mandatory items & 39 voluntary items)	not tested	<ul style="list-style-type: none"> • Level of disclosure improved significantly over the five year 84-88 because of the enforcement of the new regulations and the adoption of a number of the IASs. • Despite the improvement the overall quality is low and failed to meet the information needs of users. • Statutory body and accounting profession are less effective in monitoring and enforcing statutory disclosure requirements.
El-Modahki (1995)	Saudi Arabia	33 listed companies	adopted Cooke's (1989) list with some omission	<ul style="list-style-type: none"> • Size • industry type 	<ul style="list-style-type: none"> • There are differences in the overall disclosure between different types of activities and from one industry to another. • No association between disclosure levels and size.
Khasharmeh (1995)	Jordan	49 listed companies for two years, 1988 and 1992.	adopted Cooke's (1989) list with some omission	<ul style="list-style-type: none"> • assets • sales • gearing • industry type • liquidity ratio • proportion owned by government 	<ul style="list-style-type: none"> • Overall disclosure has increased in from 67% in 1988 to 77% in 1992. • Attributed the increase to the adoption of IASs by Jordan • No association between disclosure and any of company characteristics.
Owusu-Ansah (1998)	Zimbabwe	49 listed companies for 1994	index of 32 mandatory items disaggregated into 214 sub-items	<ul style="list-style-type: none"> • size • ownership structure • company age • multinational corporation affiliation • profitability • quality of external audit • industry type • liquidity 	<p>results of robust regression indicated that</p> <ul style="list-style-type: none"> • company size, ownership structure, company age, multinational corporation affiliation and profitability have a statistically significant positive effect • the other variables tested were not statistically significant

Appendix 2.3 Disclosure studies on developed countries

A large volume of disclosure studies has been carried on developed countries. A review was undertaken on several studies which are relevant in one aspect or another to this research. A summary of the reviewed studies is presented in this section.

The reviewed studies are chosen because these are one-country disclosure index studies. The studies which were published in the period 1961-1998 covered a large number of developed countries: UK, USA, Canada, Japan, Sweden, New Zealand, Hong Kong and Spain. All the reviewed studies used a disclosure index to assess the level of disclosure in the annual reports of a selected sample of companies. The sample ranged from 7 to 200 companies. The number of items in their disclosure lists ranged from 16 to 224 items. Some of the studies used weighting to the disclosure items by sending a questionnaire to users or preparers of the financial statements or both. Other studies used unweighted scores. In most of the studies, the relationship between the levels of disclosure and company characteristics was investigated. Company size has been the most powerful explanatory variable in most of the studies, followed by listing status. It was found in most of the studies that larger companies disclose more than smaller companies. Also it was found that listed companies disclose more than unlisted companies and multi-listed companies disclose more than single listed companies. For other company characteristics the results of the studies did not always agree.

Appendix 2.3 summarises the studies of developed countries which have been reviewed for this research. The material in the table is used at various points of this thesis.

Appendix 2.3 Summary of reviewed disclosure studies in developed countries

Study and year	Country	Companies tested	Disclosure list	Independent variables	Results
Cerf (1961)	USA	527 US companies	31 disclosure items	<ul style="list-style-type: none"> • asset size • no of shareholders • profitability 	Positive association between disclosure and asset size
Singhvi and Desai (1971)	USA	100 listed and 55 unlisted companies	34 disclosure items of which 28 items adopted from Cerf, 1961.	<ul style="list-style-type: none"> • asset size • no of shareholders • listing status • audit firm size • rate of return • earning margin 	Positive association between disclosure and: <ul style="list-style-type: none"> • asset size • no of shareholders • audit firm • rate of return • earning margin • listing status (most significant predictor)
Buzby (1975)	USA	44 listed and 44 unlisted companies	39 disclosure items, weighted by financial analysts	<ul style="list-style-type: none"> • size • listing status 	Disclosure is positively associated with company's size and not affected by listing status
Belkaoui and Kahl (1978)	Canada	200 non-financial firms	30 items, weighted by financial analysts and chartered accountants	<ul style="list-style-type: none"> • asset size • sales size • profitability • liquidity • capitalisation ratio 	Disclosure is <ul style="list-style-type: none"> • positively associated with company's size • negatively associated with both capitalisation rate and profitability • positively associated with liquidity There is a high consensus among and between users and preparers on most disclosure items except five items.
Firth (1979a)	UK	40 manufacturing companies	48 items weighted by financial analysts	<ul style="list-style-type: none"> • sales turnover • capital employed • share listing • audit firm 	<ul style="list-style-type: none"> • Voluntary disclosure is low • Disclosure is positively associated with Company's size and stock market listing • Disclosure is not associated with audit firm

Firth (1979b)	UK	100 selected from the largest 1000 industrial listed companies	48 items then (based on prior research) weighted by financial analysts	not tested	<ul style="list-style-type: none"> • Voluntary disclosure is low • Items recommended by professional accounting bodies are highly disclosed • Inflation accounting is rarely disclosed although it received a high rating from financial analysts
McNally et al. (1982)	New Zealand	industrial listed companies in New Zealand	41 voluntary items (based on prior research) weighted by financial editors and stock exchange members	<ul style="list-style-type: none"> • size • rate of return • growth • audit firm 	<ul style="list-style-type: none"> • Importance of disclosure items is different between the two groups of external users • There is a considerable divergence between disclosure practices and the importance perceived by users • No association between disclosure and size
Cooke (1989b)	Sweden	90 listed non financial companies	224 items selected from prior research, IASs and Swedish authorities recommendations, which were considered desirable by Swedish practitioners	<ul style="list-style-type: none"> • quotation status • parent company relation • annual sales • total assets • number of shareholders 	<ul style="list-style-type: none"> • Disclosure levels are variable • Significant association between disclosure and both size and listing status
Cooke (1991)	Japan	48 companies, 13 unlisted and 35 listed	106 voluntary items	<ul style="list-style-type: none"> • size • listing status • industry type 	<ul style="list-style-type: none"> • Positive and strong association between disclosure and both size and listing status • Positive association between disclosure and manufacturing companies
Cooke (1992)	Japan	35 listed companies	165 items, 76 is voluntary and 89 is mandatory	<ul style="list-style-type: none"> • size • listing status • industry type 	Same results as above

Cooke (1993)	Japan	48 companies, 13 unlisted and 35 listed	165 items, 106 is voluntary and 89 is mandatory	<ul style="list-style-type: none"> • listing status 	<ul style="list-style-type: none"> • No difference between unlisted and domestic listed companies in their CC accounts which is limited to mandatory disclosure • Domestic listed companies provide more voluntary disclosure in their SE accounts than in the CC accounts • Multiple listed companies provide more voluntary disclosure in their CC accounts than domestic listed companies and provide more voluntary disclosure in their SE accounts than in the CC accounts
Wallace et al. (1994)	Spain	50 companies, 30 listed and 20 unlisted	16 mandatory key items which contained details of up to a maximum score of 79	<ul style="list-style-type: none"> • assets • sales • gearing • earnings • liquidity • type of activity • listing status • audit firm 	<ul style="list-style-type: none"> • Positive association between disclosure and firm size • Negative association between disclosure and liquidity • No association between disclosure and other variables
Wallace and Naser (1995)	Hong Kong	80 listed companies	30 mandatory disclosure items	<ul style="list-style-type: none"> • foreign operations • profit margin • earning return • liquidity ratio • leverage ratio • assets and sales • market capitalisation • scope of business • proportion of a firm's equity owned by the public 	<ul style="list-style-type: none"> • Positive association between disclosure and both firm size and scope of business operations • Negative association between disclosure and profit

Inchausti (1997)	Spain	49 listed companies in 1989 47 listed companies in 1990 42 listed companies in 1991	50 disclosure items	<ul style="list-style-type: none"> • size • listing status • profitability • leverage • auditing firm • industry • dividends • auditor type 	<p>Disclosure is positively associated with</p> <ul style="list-style-type: none"> • size • audit firm • listing status <p>times as a surrogate for regulation explains the level of information disclosure</p>
Dumontier and Raffournier (1998)	Switzerland	133 listed non financial Swiss companies	voluntary compliance with IASs	<ul style="list-style-type: none"> • listing status • internationality • size • ownership structure • leverage • capital intensity • profitability • auditor's reputation 	<ul style="list-style-type: none"> • Univariate analysis <p>Positive influence of size, internationality, listing status, auditor type and ownership structure on voluntary compliance with IASs.</p> <ul style="list-style-type: none"> • Multivariate analysis <p>Larger, more international, less capital intensive companies with more diffuse ownership show more compliance with IASs.</p>
<p>Cooke (1998) reviewed a number of transformations of variables in disclosure studies and applied them to data from Japan and Saudi Arabia. Among these transformations are the Rank regression procedure and the Normal Scores approach. He suggested that the normal scores approach retains the advantages of using ranks but has other beneficial characteristics. He also suggested that the kind of transformation which is suitable depends on the structure of the data. He suggested that no one procedure is best but that multiple approaches are helpful to ensure the results are robust across methods. This multiple approach is adopted in this thesis as the variables are transferred into Ranks and Normal Scores before running regression analysis, as explained in detail in Chapters 6 and 9.</p>					

CHAPTER 3

3. EGYPTIAN ENVIRONMENT

3.1 Introduction

The purpose of this chapter is to give a brief description and analysis of the Egyptian environment. There is a particular interest in the issues which are of relevance to other parts of the research. Section 3.2 provides an outline of the importance of Egypt in the Arab world. Section 3.3 summarises the four different stages of the Egyptian economy. In section 3.4 the developments of the accounting profession in Egypt are presented. Section 3.5 provides a description of the changes which have taken place in the Egyptian Capital Market with a particular emphasis on the period after 1992. Section 3.6 summarises the important types of business in Egypt and the relevant legal provisions. Section 3.7 contains an analysis of the important aspects of Egyptian culture which are relevant to this research. In section 3.8 the situation of accounting education in Egypt is outlined. Section 3.9 summarises key aspects which are relevant to subsequent chapters.

3.2 Egyptian external relations

This section contains an outline the importance of Egypt in the Arab world and international relationships, and its external trade and exports.

3.2.1 Importance of Egypt in the Arab world and international relationships

Egypt is an important and influential country in the Middle East. “Egypt has traditionally played a pivotal role in Middle Eastern politics” (Merrill Lynch, 1996). Also, it has been a recognised leader of the Arab world and Arab unity has become the main plank of its

foreign policy (EIU, 1995, p.4). Egypt is mustering all its potential to establish an Arab economic bloc (ESIS, 1998).

Egypt was the first Arab country to introduce commercial, civil and other laws (modelled mostly on those of France and Belgium). These laws, some of which go back to the late 1880s, have been amended frequently (Arab-UK Business Yearbook, 1993).

Egypt was the first Middle East country to organise its own national accounting profession and form its own institute of auditors (Gress, 1985). *“Egypt is the largest Arab country in many respects, including the size of its business and accounting education systems. Egypt provides a large percentage of the practising accountants in the Arab world and an even higher percentage of the accounting faculties in this area”* (Agami and Alkafaji, 1987). An example of Egyptian influence on other Arab countries in the past decades is found in Ba-Eissa (1984) who showed how the accounting profession in Saudi Arabia has been considerably influenced by the accounting profession in Egypt.

3.2.2 Trade and exports (historical background)

Historically, politics have played an important role in determining Egyptian trade partners. Before 1952, the pattern of Egyptian external trade largely depended on which colonial power ruled the country at the time. Following 1952, Egypt's external trade changed from being an ideal source of raw materials to western industry, turning to the USSR and Eastern Europe. In the 1970s, under the 'Open Door Policy', the Egyptian trade swung once again from the Eastern Block towards Europe and the USA. By 1978, the European Economic Community had become Egypt's leading partner, accounting for 42% of its exports and 53% of its imports (Moore, 1995). In the year ended 31 December 1995 the European Union remained the leading trade partner, accounting for

36.1% of exports and 28.5% of imports. The United States of America, in the same year, contributed 18.6% of exports and 18.9% of imports (Economist, 1998)

3.3 Economic development

During the twentieth century Egypt has had four different economic stages as follows:

- Pre-1956 (large private ownership).
- From 1956 to 1973 (nationalisation and a socialist era).
- From 1974 to 1991 ('Open Door Policy' and encouraging foreign investment).
- After 1991 up to the date of this research (Privatisation and revitalising the Capital Market).

This research has concentrated on the period from 1991 to date. However, it is important to understand the current practice in the context of the continuing applicability of the economic policies and regulations adopted in the previous periods (especially those which are still in effect at the present time). Therefore, a brief description of these economic stages is presented in the following sections.

3.3.1 Pre-1956

Before 1952, the Egyptian economy was characterised by agriculture in general and by the export of cotton in particular. Most industrial projects were also connected to the cotton industry. There was not much foreign investment directly involved in the production of cotton. Foreign capital was heavily committed to the banking and exporting operations concerned with cotton (Davies, 1984).

In this period the private sector dominated economic activity. State intervention was limited to the provision of finance or equity participation. Investment policies were liberal and investment laws were enacted to attract foreign capital (ACCE, 1995).

Cairo and Alexandria were the first stock exchanges to be established in the Middle East (as early as 1883). By the 1920s and 1930s Egypt had a flourishing Capital Market. In the 1950s its stock exchange was reputed to be the fifth most active market in the world.

3.3.2 From 1956 to 1973

After the Egyptian revolution of 1952, the new government continued to encourage private and foreign investment. After the Suez problem in 1956, the government nationalised most foreign investments and increased its direct involvement in industrial production and marketing decisions. Egypt entered a period of economic management based on central planning and nationalisation. The size of the public sector became significant and emerged as the dominant force in the economy. The role of the private sector became negligible. The activities of the Cairo and Alexandria Stock Exchanges came to a virtual standstill.

There was a great need to unify the accounting terms and concepts used in preparing the financial information presented to tax and external control authorities. Therefore the Egyptian Syndicate of Accountants and Auditors issued The Accounting and Auditors Charter in 1958. Later in 1966, the Uniform Accounting System (UAS) was issued to be applied to the public sector from the beginning of the financial year 1967/1968 (Mahrous, 1987) (for more detail see chapter 4).

The Central Auditing Organisation (CAO) was established in 1964 as an independent institution which reports directly to the Parliament. All enterprises where governmental

ownership exceeds 25% of capital are subject to audit by the CAO (Davies, 1984). Among the main tasks of the CAO is ensuring the validity of applying the UAS, the correctness of books, records and accounting treatments.

3.3.3 From 1974 to 1990

In the late 1960s, the government became increasingly aware that the public sector alone could not take up the challenge of economic growth and development, nor could it meet the competing demands of capital expenditure (Moore, 1995).

In 1974, a new government adopted an “Open Door Policy” to revive and liberalise the economy. The policy encouraged the flow of capital, the transfer of advanced technology, and the development of the private sector. The corner stone of this policy was a new Investment Law no 43 of 1974, concerning “Arab and Foreign Investment and Free Zones”. This law was amended by law no. 32 of 1977 and later replaced by law no. 230 of 1989. The main goal of the Investment Laws has been to attract foreign investors to place business in Egypt. Accordingly, it offered incentives and tax exemptions for periods ranging over 5-20 years to projects established under its provisions (Deloitte Touche Tohmatsu International, 1994). The Investment Laws made a very small contribution to employment and exports. This is because the laws did not distinguish between high-priority and low-priority fields of economic activity such as labour-intensive investments, which were not encouraged (ACCE, 1995).

A new Tax Law no. 157 and a new Companies Act no. 159 were issued in 1981 (for more detail see chapter 4), to encourage and regulate the formation of private sector companies and encourage listing in the Stock Exchange. The Tax Law exempted listed joint stock companies from tax on profits in a range not exceeding the interest rate determined by the Central Bank of Egypt. As a result of these two new laws, there was a large increase in

the number of closed companies formed and listed in the Stock Exchange, but the market stayed inactive as these companies were not listed mainly for collecting capital. They were listed because the law obliged them to do that and offered them tax exemptions for being listed.

3.3.4 From 1991 to 1997

In May 1991, Egypt began its comprehensive programme for Economic Reforms and Privatisation. The programme included:

- A macroeconomic framework, which included maintaining a competitive exchange rate and reducing budget deficit.
- Public sector reform, which included restructuring and privatising public sector companies.
- Price liberalisation
- Foreign trade liberalisation
- Private sector reform
- Exchange rate policies

The “Public Business Sector Law” no 203 of 1991 permits privatisation of government-owned shares or companies which was prohibited under the previous Law 97 of 1983. In the transition period, those companies still have to apply the UAS and must be audited by the CAO. When 51% of the capital of these companies is sold they are no longer under the Public Business Sector Law and can be transferred to the CA of 1981 (Moore, 1995).

The results of the first stage of the Economic Reform Program were successful. The budget deficit had been reduced from 20% before the reforms to 2.6 of GDP in 1994. Inflation averaged 17-21% in the period from 1987 to 1990 but fell to 8.1% in 1994,

8.4% in 1995 and 7.4% in 1996. The Egyptian Pound became freely convertible to any other currency in October 1991 (MENA, 1997).

In 1992 a new “Capital Market Law” (CML) was issued to streamline all pre-existing Capital Market Regulations. The law aimed at assisting investment, privatisation and revitalisation of Stock and Bond markets. The law also sought to shift corporate heavy reliance on bank financing to alternative sources of funding (EFG, 1996).

The new CML of 1992 and its ERs of 1993 introduced for the first time in Egypt a comprehensive accounting disclosure package, as explained in chapter 4. The volume of activity on the exchange has increased greatly since the new CML as shown in table 3.1 in section 3.5.1. In 1994 Egypt had one of the world’s best-performing stock markets with growth of 157.9% (EIU, 1995). Demand for the shares of privatised companies stayed strong. In May 1995 Torah Portland Cement shares were five times oversubscribed (EIU, 1995). The Egyptian Stock Exchange had a trading volume of E£15.2 billion in 1997, placing Egypt on the list of Emerging Markets (ESIS, 1997).

3.4 Development of the accounting profession

This section explains the development of the accounting profession over four distinctive time periods and also discusses the western influence on the work of accounting profession in Egypt.

3.4.1 Before 1956

Before 1956, the UK’s political influence meant that the organisation of the accounting profession and the financial reporting practices in Egypt closely followed those of the UK. The training of accountants, the law regulating and disclosure standards were all based on those in the UK (Samuels and Oliga, 1982). Enterprises above a certain size

were required to appoint a qualified accountant to act as auditor. At the same time, the financial transactions of public sector institutions were audited by the State Audit Department, which was broadly comparable with the exchequer and audit department in the UK, particularly in its emphasis on financial regulations (Briston and El-Ashker, 1984).

The accounting profession was not officially organised until the Charter of Accounting and Auditing professions was issued in 1958. The Charter required specific qualifications (academic certification and experience) as preconditions for practising accounting as a profession. This restricted practice to qualified persons (ibid.)

3.4.2 After 1956

After nationalisation, the public sector dominated the economy. The new economic system required a different set of information from accountants. The changes were so dramatic that the organisation of the profession had to change. The Central Auditing Organisation (CAO), introduced in 1964, became the public organisation authorised to audit the public sector enterprises. The 'big eight' accountancy firms left Egypt in 1965. The Uniform Accounting System (UAS), which has to be applied in public sector companies, was issued in 1966. Many Chartered Accountants accepted governmental posts and there was a lack of professional standards, requirements and conduct (Amer, 1969).

3.4.3 After 1974

The 'Open Door Policy', adopted in 1974 to encourage foreign companies to invest in Egypt. Many accounting firms were formed and enjoyed a rapid growth. The 'big eight' accountancy firms came back to Egypt through Egyptian correspondents (Briston and El-

Ashker, 1984). With the growth of multinational companies investing or working in Egypt, practitioners began to adopt the practice of western countries. In 1980 The Egyptian Society of Accountants and Auditors became a member of the IASC and in 1983 it became a member of the IFAC. Since then efforts have been made towards the promulgation of the IASs in Egypt.

3.4.4 After 1987

In 1987, The Egyptian Institute of Accountants and Auditors was established under the umbrella of the Ministry of Finance to issue Egyptian standards. These are mainly a translation of the IASs and were issued as recommendations without any mandate (Moore, 1995) (more detail in chapter 4).

In 1996, an Egyptian Board for Accounting Standards (EBAS) was established which had the power to promulgate EASs officially along the lines of the IASs (ibid.) (more detail in chapter 4).

3.4.5 Western influence

The first important western influence on Egypt has been the French, who came to Egypt in 1798. Most of the legal system (e.g. commercial codes) is based on the French system. Law is taught in Egypt in Arabic and French.

The second significant western influence has been the British, as Egypt was a British colony for 75 years. The British accounting profession heavily affected the Egyptian accounting practice through regulations (the CA of 1954 and the Charter of Accounting and Auditing professions of 1958 were affected by the British CA of 1948), the practice of British accounting firms in training Egyptian accountants, accounting education in the UK and multinational companies working in Egypt (Briston and El-Ashker, 1984).

The third important western influence has been the American, through the extensive education and training programme carried out by the US Agency for the International Development (USAID) in Cairo and multinational companies working in Egypt and 'big eight' accountancy firms.

3.5 Egyptian Capital Market

The most important sectors of the Egyptian Capital Market are the Egyptian Stock Exchange and the Banking sector. For the purpose of this research the Egyptian Stock Exchange is more important and therefore more detail is provided.

3.5.1 Stock Exchange

As mentioned earlier, the Egyptian Stock Exchange was very active in the 1950s. Then after the nationalisation of most foreign companies the private sector role was negligible which affected the Stock Exchange dramatically. The number of listed companies dropped from 275 in 1958 to 55 by 1975. After Egypt adopted a new economic policy (Open Door Policy) in the 1970s to encourage the private sector and foreign investment, there was a revitalising effect on the Stock Exchange. However, the effect was superficial, as the trading volume remained insignificant despite an increase in the number of listed companies. This was mainly because of the rapid addition of closely held companies (15 shareholders or less) to exchange listing in order to qualify for tax exemptions. Some 80% of the 418 companies listed between 1980 to 1990 were of this type. After Egypt began its privatisation programme in 1991 and issued the new CML of 1992, there was a sharp increase in the annual volume of share trading, as shown in table 3.1 (ACCE, 1995). In 1994 Egypt had one of the world's best performing Stock Markets, with growth of 157.9% in dollar terms (EFG, 1996). However, most investors still prefer to establish closed companies and resort to bank loans (ACCE, 1995). In 1994, few

companies increased their capital through public share offerings, although these remained popular and heavily oversubscribed. Stock trading in the secondary market was also limited (EIU, 1995). The two Egyptian Stock Exchanges in Cairo and Alexandria were unified into a single market and are now electronically linked for real-time trading. In 1996 the number of listed companies decreased from 746 to 646 as the CMA began to delist rarely traded companies (LGT, 1997).

Table 3. 1 Number of listed companies in the Egyptian Stock Exchanges

Year end	No. of listed companies	Public subscription	Closed companies	Annual trading value (E£ million)
1985	318	109	209	62.9
1991	627	160	467	427.8
1992	656	162	494	596.6
1993	674	157	517	568.6
1994	700	155	545	2557.2

(Source: ACCE, 1995)

Relevant data for this research is provided by Moore (1995, p.61) who asserts: *“At the end of 1994, some 700 companies were quoted on the stock exchange. Of these, however, 545 were categorised as ‘closed’ companies, with only 155 ‘public’ and - of these - only around 100 that were actively traded. So-called ‘closed’ or privately owned companies are those that trade only among a small selected number of original shareholders”*

Joint stock companies may list their securities on the stock exchange under one of two registers (official or unofficial). If shares representing not less than 30% of the company’s nominal shares are in the hands of the general public (held by no less than 150 shareholders) then the stock qualifies to be listed in the official register, as do public issues of securities issued by the government or state-owned companies. All other securities that do not meet the criteria for listing in the official register, as well as foreign securities, must be listed in the unofficial register. The CML of 1992 declares that shares

are free of stamp duty and all dividends will be exempt from tax. Listed companies with at least 150 shareholders, and raising over 30% from the public, receive a corporate tax exemption and do not pay tax on dividends. In 1996 the capital gains tax was abolished (LGT, 1997). Unfortunately in 1993 the new tax law exempted all listed companies from the corporate tax thus removing the advantage which previously had been offered to the more widely owned companies, those which had at least 150 shareholders and 30% of their shares owned by the general public. This made no difference in tax exemption between widely owned companies and closed companies. Also in the CML, no distinction is made between companies listed in the official tables and other companies listed in the unofficial tables, so far as accounting disclosure requirements are concerned (Reyad, 1995).

In a study carried out by the ACCE in 1994 (ACCE, 1995) the current problems facing the Stock Exchange were highlighted, including lack of information; lack of market depth as closed companies currently represents 70% of listed companies. These closed companies refuse to raise funds through the public offerings for several reasons such as no distinction in tax incentives between widely-owned and closely-owned listed companies, and low-cost bank loans.

Capital Market Authority (CMA)

The CMA is a public authority attached to the Ministry of Trade, established in 1980. It is responsible for applying the provisions of the CML, reorganising and developing the Capital Market, supervising the efficient performance of its functions, organising training courses and providing information on the operation of the market (IBFD, 1994).

Listed companies are obliged to file with the CMA quarterly reports of its activities and to disclose its financial position (these reports are outside the scope of the current

research). The CMA must also receive a copy of the annual report at least one month before the date set for the general meeting, which must be held within 6 months of the end of the financial year (ibid.).

3.5.2 Banking and financial system

Before 1991, the banking sector was the most active sector of the Egyptian Capital Market and was highly regulated by the Central Bank of Egypt in interest rates, fees, commissions, exchange rates and statutory deposit requirements.

In the early 1980s, Egypt had at least six exchange rates. After sustained pressure from the IMF, only two rates (the Central Bank rate and the commercial rate) remained which were merged into a single free market exchange rate in October 1991 (EIU, 1995)

After 1991 regulations governing banks have become more liberal. Foreign banks became allowed to operate in local currency. Interest rate ceilings on domestic currency deposits and loans as well as banks' fees have been removed. Rules discriminating against private banks have been abolished (EFG, 1996).

3.6 Legal system for business

There are two sectors in Egypt public sector and private sector. Several public sector companies are listed in the stock exchange as a precursor to being privatised. These companies are under the Public Business Sector Law of 1991. Additionally, because they are listed, they are obliged to comply with the listing regulations (CML). Private sector companies can be incorporated either under the CA of 1981 or the Investment Law of 1989. Many companies prefer the latter in order to enjoy the large exemptions offered by it. The Investment Law left the regulation of accounting disclosure in accounting statements to the CA of 1981. There are many forms of business organisation in the

Egyptian private sector. However, the most common form is the joint stock company or the limited liability company. These are described in sections 3.6.1 and 3.6.2. In recent years there have been changes in the laws relating to company accounting which may require reconsideration of classification studies based on the legal system, as explained in section 3.6.3.

3.6.1 Joint stock company

The minimum share capital for a joint stock company whose shares are not offered to the public is E£250,000. If the shares are offered to the public it is E£1,000,000. For companies which are formed by public subscription, at least 49% of the shares must be offered to the Egyptian public for a period of one month. The only exceptions are cases where this percentage is already fully subscribed by the Egyptian founders, or the percentage is taken in less than a month, or the joint stock company is formed under the Investment Law (Moore, 1995).

It is important to emphasise that the exceptions are the reason that, in practice, many companies are formed as public subscription companies in name, but they are in reality closed companies as the percentage is taken by the founders or the company is formed under the investment law. The minimum number of founding shareholders is three and there is no limit on the maximum number.

Under the CA of 1981, as originally drafted, listing in the Stock Exchange was obligatory within one year of formation in the case of public subscription companies. Otherwise listing would take place after the third year published accounts. However, this requirement was cancelled under the new CML of 1992. According to Article 16, listing in the Stock Exchange is not compulsory and left to the company's decision.

The company's financial statements must be published in two daily newspapers if the company is one that has offered its shares for public subscription. Otherwise it is only required that companies send their financial statements to the shareholders by registered post.

3.6.2 Limited liability company

The Limited Liability Company is the equivalent of the private limited company in many other countries. The minimum capital is E£50,000. The number of members is limited to 50 and the minimum is two. It has restrictions on the types of activity and some administration provisions. The most important is that it cannot raise capital from the public or negotiable shares or bonds. Provisions regarding accounting and auditing and the publication of information are much the same as for joint stock companies (Deloitte Touche Tohmatsu International, 1994).

3.6.3 Classification studies

Salter and Doupnik (1992) classified Egypt (as an Arab country) in a group called 'Islamic- Romano- Germanic'. They questioned whether closer ties to the British-American classification group might occur in future in these countries. Their studies predated the privatisation era in Egypt and for the purposes of this thesis it seems likely that the classification requires to be updated for Egypt because of the increased influences of the IASs. The capital market law mandated the IASs in full from 1995 and more recently it has been indicated that the IASs will become mandatory for all companies.

Another aspect of classification studies is the distinction between macro and micro. Historically Egypt has been classified as macro-planned uniform (Alnajjar, 1986),

because of the influence of state ownership prior to privatisation, but now the law is directed towards micro-based regulation of companies.

3.7 Culture

Although Egypt stands at the cross-roads between Europe, Africa and the Middle East, Egypt has historically enjoyed a strong homogeneity among its population at an ethnic, linguistic and religious level (Moore, 1995). In this section religion and language in Egypt are briefly described. Also, Egypt's position in Gray's (1988) framework of accounting values and the effects of the changes which have taken place in Egypt on this position are summarised briefly.

3.7.1 Religion

Over 90% of the population consist of Sunni Moslems. Most of the remaining 10% are accounted for by Arab-speaking Coptic Christians. While Moslem Egyptians are faithful to their religion they are generally tolerant towards other beliefs (Moore, 1995).

According to Islam, absolute ownership of everything belongs to God. Legal ownership by the individual, that is the right of possession, enjoyment and transfer of property is recognised, but all ownership is subject to the moral obligation to share wealth. All types of business and companies which are based on sharing profits and losses between partners are allowed and encouraged in Islam. Ownership and trading of shares are allowed in Islam in so far as the company which issued the share is obliged to adhere to the general framework, which mainly prohibits "Reba" (lending with interest) and dealing in prohibited types of businesses (e.g. alcohol). In addition companies are obliged to pay "Zakat", which is one of the pillars of Islam (Abd-Elsalam, 1991).

In Egypt most of the civil laws and family relationships have been affected by Islam. However, commercial and business regulations are not. In Egypt every person is free to do what he thinks is right according to his beliefs. In Egypt Islamic banks are available, which do not deal with interest but are mainly based on financing projects through partnerships (Morabahah and Mosharakah). Traditional western-based banks are also available. Companies which follow the provisions of Islam are available and others are also available. For the purpose of this research religion is not an influencing factor, as the stock exchange listing regulations are not affected by religion in Egypt.

3.7.2 *Language*

The official language is Arabic, which for Muslims is not just a symbol of a common heritage but also a holy language (Abdul-Gader, 1997). This was the reason that it was never affected by any of the colonial powers which came to Egypt. Most of the governmental education is mainly in Arabic, with English being taught as a second language. There are some private schools which teach English extensively. Some of the university faculties of commerce opened English-speaking departments in the 1990s. Most of the accountants currently practising (especially the CAO employees) have received their accounting education in Arabic, although they may have some command of English.

3.7.3 *Gray's accounting values*

Gray's (1988) model of accounting values (professionalism v. statutory control, uniformity v. flexibility, conservatism v. optimism, and secrecy v. transparency) used Hofstede's (1980) four value dimensions (power distance, uncertainty avoidance, individualism v. collectivism and masculinity v. femininity). In this section Egypt's position in Gray's accounting value model is analysed using an approach similar to that

used by Pourialali and Meek (1995) in analysing how changing in environment can affect Gray's accounting values. Table 3.2 summarises the changes in Egypt's position in Gray's accounting values model. The data presented in this table is taken from the material presented within this chapter. The first column contains the four categories of accounting values observed by Gray (1988). Three further pairs of columns relate to three periods of economic development in Egypt. For the first two periods, namely 1950s/1960s and 1970s/1980s, there is an indication of the observed change in accounting values as perceived by the researcher, with reasons in the next column. For the final period, namely the 1990s, where changes have occurred during the period of this PhD study (and it is too early to form a firm conclusion about the direction of change), an 'expected change' is indicated, with the reasons given in the next column.

Table 3.2 Changes in the position of Egypt within Gray's accounting values model

Accounting value	After nationalisation in the late 1950s and changes occurring in the 1960s		After the Open Door Policy in the 1970s and 1980s		After 1991 when privatisation began	
	observed change	reason	observed change	reason	expected change	reason
professionalism versus statutory control	Less professionalism, More statutory control	<ul style="list-style-type: none"> • Large public (governmental) sector controlled 80% of economic activities. • Big Eight left Egypt. • CAO founded in 1964. • Many professional accountants had no option but to accept government posts. • Government managed nationalised companies, which have to be audited by the CAO 	More professionalism	<ul style="list-style-type: none"> • Big Six returned to Egypt. • Encouragement of private sector and foreign investment. • Growth of multinationals investing in Egypt. • More need for private audit firms to audit the accounts of private sector companies. • Many accounting firms have been formed and enjoyed a rapid growth. 	More professionalism	<ul style="list-style-type: none"> • Privatisation • Revitalising the capital market. • Significant increase in stock exchange activities, number of listed companies and volume of share trading. • Issuing the new CML and mandating the IASs.
uniformity versus flexibility	More uniformity	<ul style="list-style-type: none"> • CAO monitored the financial reports of public sector companies. • UAS of 1966 had to be applied to all public companies. 	Less uniformity	<ul style="list-style-type: none"> • The large number of public sector and foreign companies followed the CA of 1954 and then of 1981, which did not include a specific set of accounting standards to be followed. 	Flexibility with more comparability of listed companies	<ul style="list-style-type: none"> • Before the IASs were mandated, various standards from a mixture of countries were adopted (e.g. UK, USA). • More stringent penalties for non-compliance with the CML and the IASs are expected from the CMA. • Mandating the CML and the IASs will lead to more comparability.

Accounting value	After nationalisation in the late 1950s and changes occurring in the 1960s		After the Open Door Policy in the 1970s and 1980s		After 1991 when privatisation began	
	observed change	reason	observed change	reason	expected change	reason
conservatism versus optimism	More conservatism	<ul style="list-style-type: none"> • UAS adopted a policy of conservatism. • Economic conditions after nationalisation, with 2 wars in 1956 and 1967, encouraged conservatism. • Conservatism to minimise tax payment. 	Continuing conservatism	<ul style="list-style-type: none"> • Conservatism policy is adopted by the CA and the Charter of the Accounting Profession, 1958. • Conservatism to minimise tax payment. 	Less conservatism	<ul style="list-style-type: none"> • More interaction with global securities markets is expected. • Adopting the IASs in measurement policies is allowed.
Secrecy versus transparency	More secrecy	<ul style="list-style-type: none"> • Stock exchange activities decreased dramatically after nationalisation. • Private sector decreased dramatically with uncertainty for the future. • The dominance of public sector companies which only published gross amounts in the financial statements without any details. 	Continuing secrecy	<ul style="list-style-type: none"> • Public disclosure by closed private sector companies was not required by the CA. • Public disclosure requirements of the CA for private sector and UAS for public sector are relatively low compared with developed countries. • Stock exchange still inactive despite the large increase in the number of listed companies, as most of these companies are closed companies. 	More transparency	<ul style="list-style-type: none"> • Capital market pressures are increasing dramatically. • The CML adopted an extensive disclosure policy. • More stringent penalties for non compliance with the disclosure requirements of the CML are expected from the CMA.

3.8 Accounting education

Egyptian higher education began in 1911 with the founding of Fouad First Higher Institute of Commerce which later became part of Cairo University. The education system in Egypt was greatly influenced by the British system because of its dominance of the accountancy profession in Egypt until the 1950s (Amer and Khairy, 1981).

By 1981, Egypt had fifteen government-funded universities, all of them with a faculty of commerce including an accounting department providing courses leading to the Bachelor's degree in accounting (ibid.). Most of the universities offering accounting courses in Egypt remain government institutions with free education. There is an American university in Cairo which is a private institution. Instruction is given in English and some American professors teach there. The university is financed by American sources and follows the American system of education and instruction. In the 1990s several new private universities have been established.

3.8.1 Educational problems

Unlike many developing countries, education in Egypt is at a reasonable level. In the UN 1993 review (UNCTAD, 1994) concluded that there were no serious deficiencies in the accounting education system in Egypt. The supply and skill levels of accountants were seen as adequate. The issue of adequacy of accounting education appears to be controversial and will be a matter for future research.

3.8.2 International accounting education

International accounting education is becoming more important for Egypt as a result of a growing global investment environment, the increasing number of multinational

companies, foreign investors in Egypt and the increasing acceptability of IASs around the world. The topics of international accountings related to multinational companies were recommended by Adams and Roberts (1994) to be integrated with relevant domestic accounting courses and to teach comparative accounting as a separate course. They argued that this approach leaves “international accounting far more clearly focused and well defined”.

For Egypt, the IASs have become an important topic which ought to be taught at undergraduate level. This is because the CML mandated them and all listed companies must follow them. Comparative accounting is also an important topic as it provides the experience of other countries and the relationship between accounting and different environments in different countries. This course will produce graduates who have this knowledge which is very important to Egypt at this stage for choosing the relevant system and standards.

3.8.3 Professional accounting bodies

The accountancy profession in Egypt is organised into several accounting bodies at the highest level, but is not well organised for the other levels. The two professional accounting bodies in Egypt are:

- Syndicate of Commerce (Accounting and auditing division)
- The Egyptian Society of Accountant and Auditors.

3.8.4 Qualifications for membership

At present, any person with an accounting degree, after three years’ training in a practising firm, is entitled to enter in the register of accountants. After five years of further practical work, the person is entitled to act as an auditor of a Joint Stock

Company. A graduate may also qualify as an auditor by completing a three-year training contract with a practising member of The Egyptian Society of Accountant and Auditors. Additionally, he or she must pass examinations at the end of the three years but is then immediately entitled to audit Joint Stock Companies (Amer & Khairy, 1981).

3.8.5 Suggestions to enhance accounting education in developing countries generally and Egypt specifically

Scott (1968) suggested that the education system in developing countries should emphasise the development of the accountant's ability to adapt to a changing environment. Similarly, Novin & Baker (1990) stated that accountants must be taught how, when and where to adapt the knowledge gained. This is very important in the context of developing countries. For example, Egypt in the last 50 years has gone through four different types of economic policies, each of which affected the accounting systems and regulations. Novin & Baker (1990) recommended the following strategies for enhancing accounting education in developing countries.

- Educating businessmen about the role and benefits of accounting.
- Educating decision-makers in how to use accounting information for making economic decisions.
- Encouraging profession-university co-operation.
- Providing practical training to accounting students during their college education.
- Educating government officials about the role and benefit of accounting for economic development.
- Encouraging students' accounting association activities.

All of these recommendations are suitable for Egypt and will be beneficial if they are taken into consideration by the education authorities, as these issues are not actively exercised there.

At the third national conference of Egyptian Accountants entitled “*Labour market requirements for accounting education in the 21st century*” (December 1994), the principal topics of which graduates should have knowledge to suit the needs of the labour market in the near future were discussed. From these topics are:

- Privatisation;
- Reorganisation of some public sector companies; and
- Multinational companies working in Egypt.

In the same conference, the chairman of the Egyptian Association of accounting systems and auditing recommended that changing toward privatisation requires training of the new graduates to do the following tasks:

- Evaluation of companies and assets.
- Advanced financial analysis.
- Use of advanced information systems.

He also added that the increasing number of multinational companies in Egypt requires emphasis to be placed on training the accountants in different languages, using the IASs and computerised audit.

Also the conference delegates recommended a number of issues. Among these were:

- Increasing the role and interest of the government in supporting universities and research centres and in devoting a part of the privatisation resources.

- Developing the undergraduate education programmes according to the needs of the labour market in Egypt.
- Increasing the use of computers.
- Developing libraries.
- Developing teaching methods in the universities.
- Developing the accounting curricula in the Egyptian universities and encouraging research.
- Increasing the role and the interest of universities to develop the skills of discussions and decision-making of the graduates.
- Increasing the interest of professional associations and private organisations to professional training.
- Updating the Egyptian accounting standards to accommodate with international accounting standards.

The recommendations of this conference are very important because of the significant changes in the Egyptian environment in the last decade. However, it did not give the IASs and the English language an important weight in the education process which is important in the context of the current accounting policy adopted by the stock exchange.

3.9 Summary and conclusion

This chapter has given a brief description and analysis of the Egyptian environment. The factors emphasised in this chapter will be used in later chapters to explain observed practice and to draw relevant conclusions. The chapter has outlined the influence of Egypt on other Arab countries, the phases of economic development, the development of the accounting profession, the development of the Egyptian capital market, the legal forms of business, the culture of the country and of business, and accounting education.

It is apparent that Egypt plays an important role in the Middle East politics. Also the European Union is one of the major trading partners to Egypt.

In the last 50 years Egypt has experienced four different economic policies as follows:

- Pre-1956 (large private ownership).
- From 1956 to 1973 (nationalisation and a socialist era).
- From 1974 to 1991 ('Open Door Policy' and encouraging foreign investment).
- After 1991 up to the date of this research (Privatisation and revitalising the Capital Market).

The accounting profession has been greatly affected by the changes in the country's economic policies. It went from a profession largely influenced by the British practice in the 1950's to a dormant stage after nationalisation and the dominance of public sector in the economy which was required to be audited by the Central Auditing Organisation in the 1960s. Then in the mid 1970s, when the government adopted the "Open Door Policy" and encouraged private sector and foreign investment, the profession began to revive again and the 'big eight' returned to Egypt again through Egyptian correspondents. After Egypt began its privatisation programme in 1991, the accounting profession needed to be developed to cope with the growing stock exchange. The Egyptian accounting practice has been historically influenced by the British through colonialism, British businessmen, education and multinationals. Since the mid 1970s it has began to also be influenced by the Americans also mainly through multinational companies and education. It appears from the analysis of the development of the accounting profession that it is not as strong as in many developed countries and therefore its pronouncements must be backed by the law if they are to be adequately respected.

The Egyptian Stock Exchange has gone through dramatic changes in the past 50 years, depending on the economic policy adopted by the government. In the early 1950s, the Egyptian stock exchange was very active. In the early 1960s it changed to a dormant stage after nationalisation. In the 1970s, when Egypt adopted the “Open Door Policy” and encouraged the private sector, a large increase in listing of companies in the Stock Exchange took place in the late 1970s and 1980s. However, the trading volume remained insignificant. This was because a large number of listed companies were closed companies. After Egypt began its privatisation programme in 1991 and the issue of its new CML in 1992, there was a sharp increase in the annual volume of share trading (ACCE, 1995). In 1994 Egypt had one of the world’s best performing Stock Markets (EFG, 1996). However, it was reported by the ACCE in 1995 that the Egyptian Stock Exchange had a number of problems, the most important being the difficulty of obtaining the required information, and the large number of closed companies listed which are rarely traded. The analysis of relative costs of non-compliance and compliance presented in the chapter indicates that for the rarely traded companies the non-compliance costs were not high compared with compliance costs. However, for traded companies and for public sector companies which were listed for purposes of privatisation in the near future, market pressures were higher and so non-compliance costs were greater.

Banking and financial system reforms were summarised in the chapter. Exchange and interest rates were freed in the first stage of the economic reform programme.

The most common type of business in Egypt is the joint stock company. In practice most private sector listed companies take the form of closed joint stock companies. The important provisions of these companies were summarised in the chapter. The effects of the changes in company law following the privatisation programme have caused the position of Egypt in international classification to move from macro-based to micro-

based. The effect of economic changes on Egypt's position in Gray's accounting value model were summarised in the chapter.

The accounting education development and current problems were discussed in the chapter. A number of recommendations on accounting education in developing countries which have been developed in the literature and are important in the context of Egypt were presented. Also several recommendations of the third national conference of Egyptian Accountants entitled "Labour market requirements for accounting education in the 21st century" (December 1994) were presented. However, the recommendations did not give the IASs an important weight in the education process. As will be explained in chapter 4 the IASs have been mandated by the ERs of the CML in 1993. Also, and more important, is that the IASs are issued in English but accounting is taught mainly in Egypt in Arabic. This means that many graduates may not be familiar with the IASs in detail. Consequently there is an urgent need for bilingual (Arabic-English) graduates. After adopting a privatisation policy and having a growing Stock Exchange, Egypt needs graduates who can master both languages.

The discussions and summaries included in this chapter have shown that Egypt has specific historical and environmental factors which distinguish the country from others. These factors are likely to affect disclosure practices. This research will investigate the effect which these factors might have on disclosure. In particular, the effect of the following issues will be investigated further in the empirical part of this research:

- Changes in economic policies on accounting disclosure practices, especially the most recent change toward privatisation.
- Anglo-American influence on accounting disclosure practices.
- Changes in the capital market policies and regulations.

- Lack of stringent action towards non-traded or rarely traded companies on their accounting disclosure practices.
- Legal system of business which allows the formation of joint stock companies which are in most cases closed companies. These companies are allowed to be listed, although their shares are not traded.
- Accounting education, which is mainly in Arabic. In the past there was no interest in the IASs. This means that most of practitioners do not possess an up-to-date knowledge of IASs.

The results are reported and discussed in chapters 7, 8 and 9.

CHAPTER 4

4. EGYPTIAN ACCOUNTING REGULATIONS AND STANDARDS

4.1 Introduction

The purpose of this chapter is to outline the relevant regulations for mandatory disclosure in Egypt and to explain in detail how the accounting standards and regulations in Egypt (as an example of a developing country) have been affected by the IASs.

In this chapter, the accounting regulations and standards which are related to disclosure and were effective at the date of the research are discussed. These regulations and standards are presented in the chapter in a chronological order and are summarised at the end of chapter so as to highlight the matters which are relevant to the empirical part of this research.

The chapter begins with a brief summary of the minor guidelines included in the Charter of Accounting and Auditing Professions of 1958 which are explained in section 4.2. The important features of the Uniform Accounting System of 1966 (UAS) which has to be applied by public sector companies are summarised in section 4.3. Then the important features of the Companies Act of 1981 and the Investment Law of 1989 are presented in sections 4.4 and 4.5 respectively. The main recommendations of conferences which took place in Egypt in the 1980s highlighting the importance of issuing accounting standards in Egypt, are summarised in section 4.6. Egyptian Accounting Standards (EASs) which were issued between 1987 and 1992 are summarised and then compared in detail with their extant IASs counterparts in section 4.7. The important features of the Capital

Market Law are summarised in section 4.8. The new Board for standard setting and the example of development of a standard for finance leases are discussed in section 4.9. Relevant regulations for listed companies are summarised in section 4.10. The chapter is summarised in section 4.11.

4.2 Charter of the Accounting and Auditing Professions

The fifth division of Article 5 of the Charter of the Accounting and Auditing Professions (1958) states that the auditor has to examine whether the company has applied generally accepted accounting principles. While GAAP has never been defined or determined formally, it is taken to include the following: (SAA, 1958)

- Recording fixed assets at their historical cost.
- Depreciating fixed assets adequately according to their nature.
- Applying the general methods for valuing inventory - either cost or the lower of the cost and the market price. Companies are allowed to use other methods for special reasons. In all cases there has to be consistency in the method of valuation.
- In the calculation of the debtors' balance, relevant provisions have to be deducted.
- The accruals basis has to be followed in determining revenues and costs of the period.
- The enterprise is normally viewed as a going concern. Profits or losses and the valuation of assets and liabilities must be based on this assumption.
- Preparing the balance sheet and the final accounts on the assumption that the value of the money unit is stable (i.e. that there is no inflation).
- Following the conservatism policy which means any unrealised profits are not taken into account. At the same time any expected losses have to be considered by making adequate provisions. For long term construction enterprises the amount of profit of the

year is estimated based on a percentage of completion of the work, making adequate provision for expected losses.

4.3 Uniform Accounting System of 1966

As mentioned in chapter 3, the UAS was issued for public sector companies in 1966. It includes specific accounting standards and regulations which are set mainly for facilitating national planning and control through co-ordinating both financial and social accounting (Alhashim, 1977). According to the UAS, companies are required to prepare the traditional financial statements (Elhalawani, 1993):

- Balance sheet;
- Profit and loss account;
- Production and trading account.
- Additionally, companies are required to prepare the following:
- Current production account;
- Statement of changes in financial position;
- Cash flow statement.

The UAS requirements are not tested in this research since they are not a part of the listing regulations. When public sector companies are listed in the Stock Exchange as a precursor to privatisation these companies have to fulfil the Stock Exchange regulations which will be summarised at the end of this chapter. In the meantime they have to submit other reports to the Central Auditing Organisation, prepared according to the UAS, for control and performance regulations which are not relevant to the purpose of this research.

4.4 The Companies Act of 1981 (CA)

The CA of 1981, which replaced its predecessor (CA of 1954) included only specific models of financial statements to be disclosed. These models have been used to construct the CA disclosure list (see chapter 6). These statements have to be based on the historical cost system and the accruals basis.

The CA concentrated upon organising the audit profession and putting a responsibility on the auditor to give an opinion about the regularity of the company's accounts and whether the final accounts represent a true and a fair view of the company's financial position and results of business according to the GAAP (which have never been defined). The important features of the CA are summarised as follows:

According to article 187 of the Executive Regulations (ERs) of the CA, at the end of every financial year the Board of Directors is required to prepare the following:

- Balance sheet
- Profit and loss account
- Board of directors report.

The ERs of the CA included standard models for the statements and the report of the board of directors, which were required to be published in two daily newspapers if the company was publicly owned or only sent to shareholders by registered post if it was a closed company.

The ERs also included details of the timing of the issuance of the annual report, definition of net profits and required reserves and profit distribution and other details concerning the auditor and the management. However, neither the CA nor its ERs included any provisions on accounting standards or policies. The CA required the financial statements

to be prepared according to generally accepted accounting principles which were never defined in the Act. This led to diversity in practice and lack of comparability.

4.5 The Investment Law no 230 of 1989

The Investment Law no 230 of 1989 (which replaced its predecessor no 43 of 1974) does not require any minimum level of Egyptian participation. Approved projects may in principle have 100% foreign ownership, except in some sensitive cases where it is in the public interest to restrict foreign ownership. The law also grants tax exemptions for periods ranging from 5 to 20 years to projects covered by it. In addition all projects, irrespective of their legal forms, are regarded as private sector projects and therefore not subject to laws affecting the public sector (IBFD, 1994). The Investment Law does not require specific accounting disclosure provisions from companies. It left them to the provisions of the CA of 1981.

4.6 Conferences held in the 1980s, which recommended the issuance of accounting standards

Egypt has become a member of the IFAC in 1980. Since then the national professional accountancy bodies have been under an obligation to encourage the adoption of the IASs in their countries. Egypt had a number of conferences in the early 1980s, which encouraged the adoption of the IASs.

The International Conference of Accounting and Auditing organised by the Accounting and Auditing Division of the Syndicate of Commerce Professions (SOCP), which was held in Egypt in 1980, recommended the following (SOCP, 1980):

- The importance of the development of the auditing profession and the improvement of its performance and independence.

- The necessity for accountants and auditors to follow the rules and regulations of the Charter of the Accounting and Auditing Professions which was approved by the Syndicate of Commerce.
- Professional offices should be allowed to participate in the audit of public sector companies.
- The setting up of a committee, one of the purposes of which was to set accounting standards to be applied in Egypt in conformity with IASs, utilising historical cost as the basis for statements.
- Committees should be formed to study the possibility of establishing an accounting and auditing institute to represent qualified professional accountants and auditors and also to study methods of training prospective accountants.

It appears from the recommendations that the participants were aware of the lack of accounting standards in Egypt and that they had an interest in Egypt adopting the IASs.

In 1986, the second international conference on accounting and auditing in Egypt, organised by the Egyptian Society of Accountants and Auditors, was opened by Dr. Hegazy (Cairns, 1986), who raised a number of questions:

- Should the profession take the lead in developing and setting accounting standards or should it leave the matter to the government and other interested parties?
- Should Egypt have a set of standards or should it limit itself to a set of guidelines?
- Is it practicable to use the IASs in Egypt?
- Should a standard-setting body include representatives of the accountancy profession and the government, the Stock Exchange and other interested parties?

Another question related to accounting standards raised in the same conference was “Should Egypt adopt standards which it has not influenced and in the development of which it has not been a participant?”.

In this conference, several options for standard setting were suggested by David Cairns, the Secretary General of the IASC:

- Follow the examples of Nigeria and Kenya of developing national standards based and closely linked to the IASs; or
- Follow Zimbabwe and Botswana and adopt all IASs; or
- Follow Malawi’s approach and develop national forewords that deal with the application of the IASs in Egypt; or
- Follow a suggestion, previously offered by Michael Renshall (UK), of using the European Community’s Fourth Directive and adding some accounting standards; or
- Use the IASs but adapt them to the national environment.

Cairns suggested choosing one of these alternatives and involving all interested parties in the standard setting process (Cairns, 1986).

At this point Egypt was not sure which option to choose to issue accounting standards. Therefore alternative options were offered by Cairns. At that time the acceptability of the IASs was not as strong as it is now; also Egypt had a large public sector, therefore other options were offered beside the adoption of the IASs.

In the same conference several recommendations were also raised, including the following:

- The speedy formation of an independent board to formulate, establish and monitor the accounting standards and auditing guidelines.

- The board should set the priorities for the issue of statements on accounting and auditing standards and should expose drafts to open discussion within the profession and by interested parties, before final approval.
- The board should have a permanent secretariat to help in drafting the suggestions and publishing these standards, which should be mandatory. Such a board should have the right, when necessary, to form some technical and specialised committees for Accounting Standards, Auditing standards and Professional Ethics.
- The formulation of the Egyptian Accounting Standards issued by this board should be based primarily on the IASs after taking into consideration the existing economic, and social needs and the specific accounting environment in Egypt.
- Efforts should be made by this board also to suggest developments of Accounting Standards for the governmental and public sector within a framework of simplicity, which achieve comparability with the private sector.

4.7 The Egyptian Accounting Standards (EASs)

In 1992, the Egyptian Institute of Accountants and Auditors (EIAA) completed the preparation of 20 Egyptian Accounting Standards (EASs). These standards were presented and discussed in a number of public seminars held under the supervision of the EIAA and the standards were recommended by the Institute for use in practice in the following order:

In 1987, a public seminar, supervised by the Egyptian Institute of Accountants and Auditors (EIAA), was held for discussion of the first four accounting standards:

1. Disclosure of accounting policies.
2. Valuation and presentation of inventories in the context of the historical cost system.
3. Depreciation accounting.

4. Accounting for the effects of changes in foreign exchange rates.

In 1989, a further seminar was organised for the public discussion of another four standards:

5. Statement of sources and application of funds.
6. Capitalisation of borrowing costs.
7. Information to be disclosed in the financial statements.
8. Presentation of current assets and liabilities.

In 1992, a further conference discussed standards on:

9. Net profit or loss for the period, fundamental errors and changes in accounting policies.
10. Contingencies and events occurring after the balance sheet date.
11. Accounting for construction contracts.
12. Accounting for research and development activities.
13. Information reflecting the effects of changing prices.
14. Accounting for property, plant and equipment.
15. Accounting for and disclosure of government grants and assistance.
16. Accounting for business combinations.
17. Consolidated financial statements.
18. Related party transactions.
19. Accounting for investments.
20. Revenue recognition.

Despite the independent process of standard setting, scrutiny of the standards soon reveals similarities to International Accounting Standards. A detailed comparison between the EASs and the IASs in place at the time of issue of the EASs reveals:

1. A group of IASs (14 standards), fully comparable to the EASs.

2. Another group of IASs (6 standards) comparable after minor adaptation.
3. A third group of IASs (9 standards) not relevant to Egypt.

(See Appendices 4.1 to 4.3 respectively for a description of these three groups of IASs)

In the context of the various phases which have been identified in the standard setting process operated by the IASC (Table 4.1) it may be noted that the Egyptian Accounting Standards issued by the EIAA in the period from 1987 to 1992 have not been updated to consider the changes resulting from the comparability project or the International Organisation of Securities Commissions (IOSCO) core standards project. This means that the EASs are out of date and cannot replace the IASs in domestic use in Egypt.

Table 4. 1 Phases in the development of the work of the IASC

Stage		dates
1	Issue of general standards	1973-1979
2	Development of more detailed standards	1980-1989
3	Reduction of flexibility (Comparability project)	1990-1995
4	IOSCO core standards project	1995-1998

(Source: Roberts et al., 1998).

4.8 Capital Market Law of 1992 (CML) and mandating all IASs

In 1993, the Executive Regulations (ERs) of the Capital Market Law (CML of 1992), were issued. These included a statement (no. 58) requiring listed companies to use IASs in all those areas where the CML is silent. All listed companies had to meet these requirements by October 1995.

Several disclosure requirements are stated in the ERs of the CML. These generally match the disclosure requirements of the IASs with the exception of the statement of sources and application of funds. The ERs of the CML were issued in April 1993 and included a model of the statement of sources and application of funds based on IAS 7 in issue at that

date. In January 1994, the new IAS 7 came into effect, replacing the statement of sources and application of funds by a cash flow statement. The ERs of the CML were not adapted for the new IAS 7. This led to confusion in Egyptian practice in the transition period. Examination of a sample of listed companies accounts for 1995, reported in chapter 8, shows that some companies followed IAS 7 and prepared the cash flow statement, another group prepared the statement of sources and application of funds, while a third group prepared both statements.

4.8.1 Official language of the IASs

The official text of IASC Standards, Interpretations, and the Framework is in the English language. In 1998, German, Russian and French Translations of International Accounting Standards became available from IASC. The IASs have been translated into more than 30 languages, generally by IASC member organisations. However, those translations are not official IASC translations.

The IASC was contacted by the researcher to enquire about Arabic translations of the IASs. It is known that there is widespread support for IASs among Arab countries (IASC, 1997). A list of countries, including Egypt, Kuwait and Lebanon, and their contact organisations, was given by the IASC. The contact organisation in Egypt was the Egyptian Society of Accountants and Auditors. The latter was contacted, by telephone, but there was no Arabic translation for the IASs. This meant that, although permission had been obtained for translation, it was apparently not undertaken and there has been no official Arabic translation publicly available in Egypt in the period covered by this research (see table 4.2). The issue of a language barrier is taken further in the empirical part of this research.

The ERs of the CML had an appendix which included a translation of some of the additional disclosure requirements of the IASs and some models of financial accounts. In the meantime, it was left to the responsibility of companies themselves to discover those aspects of the IASs required under the provisions of Statement 58 which required listed companies to apply the IASs in matters not included in the regulations.

Many companies have contacted the Capital Market Authority (CMA) asking for an approved Arabic translation of the IASs. Several auditors who are members of the Central Auditing Organisation (CAO) team have expressed their concerns in their audit reports, stating that “There is a lack of an approved Arabic translation”. (see Table 4.2).

Table 4. 2 Audit report of a listed company

Central Auditing Organisation	
Audit Report on the financial statements of the Suez Cement Company at 31 December 1995, according to the requirements of the Capital Market Law	
We have audited the financial statements of the Suez Cement Company, SAE, which was formed under the Investment Law 43 of 1973, which was replaced by Law 230 of 1989.	
The details of the financial statements are: Balance sheet at 31 December 1995 with the amount of E£744 million Income statement of the year then ended, with a net profit of E£280 million Statement of sources and use of funds Statement of proposed distribution of profit.	
These statements were prepared by the company, according to the requirements of the Executive Regulations of the Capital Market Law 95 of 1995, and are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit according to generally accepted principles.	
The company keeps proper financial accounting records which include all that is required by the law and by the statutes of the company, according to generally accepted principles. But we express our concern about the lack of an approved Arabic translation of the International Accounting Standards mentioned in statement 58 of the Executive Regulations of the Capital Market Law. Such approval is required by Law 115 of 1958 and by the Egyptian Constitution.	
Except for the aforementioned, the balance sheet presents truly and fairly the financial position of the company as on 31 December 1995 and the profit and loss account reflects correctly the results of its operations for the year then ended. The information contained in the Report of the board of directors and the financial statements conforms to the requirements of the Companies Act 159 of 1981.	
May 1996	Auditors' signatures and names

Mandating the use of IASs may have confused many people, especially local Egyptian accountants who may not know whether their practice is compatible with or similar to the IASs. Before 1992 there was no great interest in knowing the IASs, largely because of the economic environment and the prevalence of public sector companies which were required to apply the Uniform Accounting System.

It appears that there may be a language barrier concerning the new regulations, especially the part of the IASs which was not appended to the CML in Arabic. The language barrier is a complex matter because there is more than one problem. There was, at the time of this research, no official Arabic translation of the IASs in Egypt. There may have been private translations in existence but there was no ready access or publicity for such translations. Even if they were available there would be a problem of knowing how reliable they were. Companies were unlikely to be able to find technical support in understanding the English language versions of IASs, unless they had 'big six' auditors. Understanding the technical language may be difficult even for a person who has a good command of English in general use. In particular a language barrier exists in the following respects:

- Lack of availability of an official Arabic translation.
- Lack of access to an official Arabic translation.
- Lack of availability of technical support.

This new variable will be tested in the empirical part of this research in chapters 7 and 8.

4.8.2 The Anglo American Influence on the IASs and on the Egyptian regulations

It is generally agreed that both the UK and the US exert significant influence on the standard setting functions of the IASC. A study carried out by Hove (1990) revealed that there are great similarities between the IASs and their UK and US counterparts.

In Egypt, there has been an Anglo-American influence on its regulations (e.g. CA of 1981) and practice (through education, multinational companies and the Big-six). From a comparison between both the IASs of (1995) and the CA of (1981) disclosure requirements, several similar items were found. To test whether familiarity with the

regulations might affect disclosure practices, the disclosure list was subdivided according to the date of the regulations as explained in detail in chapter 5.

4.8.3 International Accounting standards and user types in developing countries

There is a debate on whether the whole world can have the same accounting practices and values against the view that allows for differentiation in these areas, either over time or permanently (which may be described as ‘universalism versus particularism’). This leads to an important question of whether the IASs are relevant to developing countries (Briston, 1984; Samuels and Oliga, 1982; Peasnell, 1993; and Wallace, 1993). This thesis does not address specifically this wider issue of relevance but provides insights on the applicability of the IASs to a developing country, as a contribution to the debate.

The main user/use combinations for accounting in developing countries are:

- Decisions by investors in publicly owned companies.
- Decisions by owners and others in privately owned companies (closed).
- Reporting to tax authorities.
- Decisions by managers.

(Nobes, 1998)

The IASC’s conceptual framework fits best with the first type of user/use and not well with the third and fourth types of user/use. Several IASs are not relevant for the third type of user/use and less relevant for the second type of user/use. Full scale IASs may be unnecessary and too expensive for the second type of user/use.

By applying Nobes’ user/use type framework to the Egyptian Stock Exchange, there were 700 companies listed in 1995, of these 541 were closed companies (15 shareholders or

less) and rarely traded. These companies are from the second user type which mean that the full-scale IASs may be unnecessary and too expensive for them as suggested by Nobes. The rest of listed companies are publicly owned companies and most of them are frequently traded companies.. These companies are from the user type one. This means that the IASC's framework is more relevant to them. (see also compliance costs and non-compliance costs, section 2.2.5).

Differentiating between these two types is important in the empirical part of this research to observe the difference in their disclosure practices.

4.9 New Board for standard setting

In May 1996, a Ministerial decision (No 323 of 1996) was issued stating the intention to form a permanent national committee for issuing Egyptian accounting standards in the context of the IASs, after adapting them to suit the Egyptian environment. The Committee is chaired by the chairman of the CMA. Its membership includes representatives of many important organisations such as:

- The Central Auditing Agency (CAO)
- The Egyptian Institute of Accountants and Auditors (EIAA)
- The Egyptian Association for Costs
- The Egyptian Association of Accountants and Auditors (EAAA)
- The Syndicate of Accountants and Auditors
- The General Authority for Investment (GAFI)
- The Central accounting department of the CMA.

An example of the work of the Committee is described in Table 4.3.

Table 4. 3 Development of a standard for finance leases

In June 1995 Law 95 of 1995 was issued concerning finance lease contracts. The law was quite different from international practice and standards. The Law did not specify the particular conditions required for classifying a contract as a finance lease. It relied either on the use of the words 'finance lease' in the contract or on a contractual requirement of purchase at the end of the lease period (statements 2 and 5).

The Law requires the lessor to depreciate the value of the leased asset. In order to enjoy five years' exemption from tax the lessor must include depreciation in the calculation of taxable profit. The lessee may deduct only the rental charge from taxable profit. The explanatory notes are used to disclose the nature of the finance-leasing contract and any rent paid or accrued. These practices are contrary to the requirements of IAS 17.

In October 1996 a ministerial decree was issued, forming a special committee to set accounting rules and a standard for finance leases. Various parties were invited to participate. Egyptian correspondents of international accounting firms expressed their concern over the confusion caused by the Law and proposed changes to conform to IAS 17.

The accounting regulations in Egypt are continuing to develop (IASC, 1998 and ACCE, 1997).

4.10 Relevant regulations of listed companies

As explained earlier, regulations which govern Egyptian listed companies as in 1995 and which are relevant to this research can be summarised as follows:

1. The Companies Act of 1981
2. The Capital Market Law of 1992 and its ERs of 1993
3. Extant IASs

The disclosure requirements of the CA are not so comprehensive as the CML's requirements, which included in many cases the same items required by the CA except the ones of the Board of directors report. The CML's requirements also include other additional items mainly from the IASs. These requirements are appended to the CML in

Arabic. It also includes Statement 58 which requires companies to follow the IASs in matters not included in the regulations. The latter is not appended to the law in Arabic.

The Egyptian Accounting Standards (EASs) are excluded from the list of relevant regulations because they were neither mandated by a law nor included in the CML which refers only to the extant IASs. Additionally, since the EASs are effectively a translation of some of the IASs it is not practical to test for them separately.

The Uniform Accounting system (UAS) is not included in the list of relevant regulations because it is not a listing requirement. As explained in section 4.3, public sector companies are required to make separate reports using it for purposes of national control and performance evaluation, not for the Capital Market Authority.

4.11 Summary and conclusions

This chapter has discussed the Egyptian accounting regulations and standards which are related to disclosure and were effective at the date of the data analysed in this research (December 1995).

The accounting guidelines included in the Charter of the Accounting and Auditing Professions of 1958 have been summarised in section 4.2. This charter is out of date and requires to be updated, as recommended by Eldeeb (1993).

A brief explanation of the UAS of 1966 was provided in section 4.3. The UAS is not a part of the regulations for listed companies and therefore it is not relevant to the purpose of this thesis. It is important to note that listed Public Sector companies, in addition to complying with the listing regulations, have to comply with the requirements of the UAS. Because of the differences between both requirements, the companies prepare two sets of

accounts, one according to the UAS and the other according to the CML. The latter is the one tested in this research.

The disclosure requirements of the CA of 1981 were summarised in section 4.4. The requirements are not comprehensive compared with the CML or the IASs. This is because the CA was issued in a period where external disclosure was not an important matter (dominance of public sector and closed companies).

The Egyptian Accounting Standards were summarised and compared with their extant IASs counterparts in section 4.7. As shown in the tables, most of these standards were comparable to IASs. Six IASs had to be modified because of unique legal circumstances (e.g. strict historical cost accounting) or economic circumstances (e.g. exchange rate setting by the central bank, relatively high inflation rates). It is important to note that at the time of writing this research some of these conditions no longer exist. This means that the standards are out of date and require to be updated. A further eight IASs were considered to be inappropriate, mainly because of differences in the institutional arrangements in place in the country (e.g. differences in pension arrangements and the relative lack of leases, associates and joint ventures). Since then, the importance of IASs has increased greatly, when the capital market mandated their use in all areas not covered by local laws. However, it must be recognised that Egypt will continue to have its own unique institutional arrangements such that specific International Accounting Standards may not be appropriate either in full or in certain respects. Therefore, after a decade of experience with setting standards for public companies, Egypt has reached what may, at least for the time being, be seen as a final position with regard to standard setting. It is a position which means that the country can benefit from the knowledge, skills, and experience of the IASC while not having to accept all its standards if they are inappropriate to the country, whether as a result of differences in the economic or legal

environment or because of any other unique circumstances. Egypt has joined a fairly large and diffuse group of countries that sets its own standards which will be explicitly based upon IASs. Therefore, it will seek in the future to ascertain the acceptability of all IASs. Where necessary they will be modified before being introduced into the country.

The CML of 1992 was explained in section 4.8. This law can be considered a turning point in the history of disclosure regulations in the Egyptian Capital Market, as it introduced for the first time a comprehensive disclosure package in an attempt to revitalise the Stock Exchange and to increase public confidence in financial reporting. The CML is also important from an international perspective, as it requires in its Statement 58 that listed companies apply the IASs in matters not included in the regulations. Part of the IASs disclosure requirements are translated and appended to the ERs of the CML (1993). The rest of the IASs disclosure requirements are not translated and it is left to the responsibility of companies to be aware of them. This has contributed to creating a language barrier for a part of the regulations. The effect of the language barrier on disclosure will be tested empirically in chapter 8. Also, the CML has to be updated regularly and the statement of sources and applications of funds has to be replaced by cash flow statement.

The relevant regulations of listed companies were summarised in the section 4.10 in the chapter. These regulations are:

- The CA of 1981
- The CML of 1992
- The extant IASs.

Chapter 5 explains further how a detailed list is prepared for the disclosure requirements of each of these regulations which are the basis for a master disclosure list for mandatory requirements in the Egyptian Stock Exchange.

The discussions and summaries included in this chapter have highlighted a number of important issues which are investigated further in the empirical part of this thesis:

- The effect of the 1992/3 changes in the Stock Exchange regulations (three different and overlapping regulations) on accounting disclosure practices of Egyptian listed companies (chapter 7).
- The effect of familiarity of those parts of the IASs requirements, which have been included in the established regulations (CA of 1981) on accounting disclosure practices (chapter 8).
- The effect of language on accounting disclosure practices of Egyptian listed companies (chapter 8).

Appendix 4. 1 International accounting standards which are fully comparable to the corresponding Egyptian standards

EAS	IAS	Title	effective date of IAS	Subsequent change to the IAS
1	1	Disclosure of accounting policies	1975	Reformatted, effective 1.1.95
3	4	Depreciation accounting	1977	Reformatted, effective 1.1.95
6	23	Borrowing costs	1977	Reformatted, effective 1.1.95
7	5	Information to be disclosed in financial statements	1977	Reformatted, effective 1.1.95
8	13	Presentation of current assets and current liabilities	1981	Reformatted, effective 1.1.95
9	8	Net profit or loss for the period, fundamental errors and changes in accounting policies	1979	Superseded by IAS 8, Dec. 93, effective date 1.1.95
10	10	Contingencies and events occurring after the balance sheet date	1980	Reformatted, effective 1.1.95
11	11	Construction contracts	1980	Superseded by IAS 11, Dec. 93, effective date 1.1.95
12	9	Research & Development costs	1980	superseded by IAS 9, Dec. 93, effective date 1.1.95
15	20	Accounting for government grants and disclosure of government assistance	1984	Reformatted, effective 1.1.95
17	27	Consolidated financial statements	1990	Reformatted, effective 1.1.95
18	24	Related party disclosures	1986	Reformatted, effective date 1.1.95
19	25	Accounting for investments	1987	Reformatted, effective date 1.1.95
20	18	Revenue	1984	Superseded by IAS 18, Dec. 93, effective date 1.1.95

Appendix 4. 2 Egyptian standards with minor differences from the IASs

EAS	IAS	Title	Comment on the difference	Effective date of the IAS	Further changes to the IAS
2	2	Valuation & presentation of inventories in the context of the historical cost system	Using a different classification for inventory, within the current asset classification, which is "Inventory" consists of the following items: (a) raw materials, fuels , spare parts and others; (b) unfinished products and work in progress; (c) finished products; (d) goods purchased for resale	1975	1993 version superseded the 1975 version
4	21	The effects of changes in foreign exchange rates	Using a different definition of the "spot rate" which is "the exchange rate published by the authorities or dealt with in the free market". The reason for this difference is that, prior to 1991, the exchange rate between the Egyptian pound and all foreign currencies was set by the Central Bank of Egypt. The rates were liberalised in 1991. This means that the EAS has to be adapted and the phrase "the exchange rate published by the authorities" should be omitted.	1983	1993 version superseded the 1983 version

5	7	Statement of changes in financial position [IAS 7 later became Cash Flow Statements]	<p>The following paragraphs were omitted from the EAS:</p> <ul style="list-style-type: none"> • Consolidated financial statements • Preparing the statement of changes in financial position on a consolidated basis • Accounting for investments using the equity method • How to present investments in the statement and the acquisition or disposal of subsidiaries <p>The possible reason for these differences is that the EAS was issued in 1989 before the start of the privatisation programme. Those kinds of investment were not common in a country where the public sector dominated and there were many constraints on private sector growth. This situation has changed rapidly since 1991. The IAS was replaced by the cash flow standard in 1994, which means that the EAS will have to be changed to conform with the IAS</p>	1977	1992 version superseded 1977 version
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Appendix 4.2 Egyptian standards with minor differences from the IASs (continued)

EAS	IAS	Title	Comment on the difference	Effective date of the IAS	Further changes to the IAS
13	15	Information reflecting the effects of changing prices	A sentence was added to the EAS "It is very important to encourage preparation of information reflecting the effects of changing prices". This is because, at the time of issuing the EAS, the inflation rates were relatively high. As mentioned by Merrill Lynch (1996) these rates were 17%-21% in the late '80s, slowing down to 8.1% in 1995 and around 7% in 1996.	1981	reformatted 1995
14	16	Property, plant and equipment	All parts of the IAS relating to valuation of property, plant and equipment, using bases other than historical cost, were omitted. This is because historical cost is mandated by the Egyptian law.	1982	1993 version superseded 1982 version
16	22	Business combinations	The EAS required an additional disclosure of the changes in the legal form of the combining firms which may affect the limits of guarantees offered to creditors which requires their approval	1983	1993 version superseded 1982 version

Appendix 4. 3 IASs which have no corresponding Egyptian standard

IAS	Title	Comment	Date*
12	Accounting for income taxes	Egypt has a special tax law	1979 (R)
14	Reporting financial information by segment	After nationalisation, and the consequent dominance of the public sector, financial reporting to the public was not important and therefore segmental reporting had low priority. All segment information was available to the government because the employees of the CAO have access to companies' documentation	1983 (R)
17	Accounting for leases	Leases especially finance leases were not common in Egypt when the EASs were prepared. However the situation has changed latter as explained in table 4.5.	1982 (R)
19	Retirement benefit costs	Egypt has a special law for its benefit plan which is sponsored by the government	1983 (R)
26	Accounting and reporting by retirement benefit plans	ditto	1987 (R))
28	Accounting for investments in associates	This type of investment was not common in Egypt in the period of dominance of the public sector.	1989 (R)
29	Financial reporting in hyperinflationary economies	not applicable	1983 (R)
30	Disclosures in the financial statements of banks and similar institutions	Egypt has special laws for these financial institutions	1990 (R)
31	Financial reporting of interests in joint ventures	See comment on IAS 28	1990 (R)

*(R) = reformatted 1995

CHAPTER 5

5. RESEARCH QUESTIONS, HYPOTHESES AND THE DISCLOSURE LIST

5.1 Introduction

One of the purposes of this research is to contribute to the literature of measuring accounting disclosure (general objective 2), which is driven by the question: Can disclosure measurement techniques which have been applied to developed countries be adapted and extended to be more relevant to a complex regulatory system such as that found in Egypt? In the regulatory system in Egypt, various regulations are in effect at the same time. Also there is overlap in some respects between the disclosure requirements of three different regulations. Additionally, one part of the IASs disclosure requirements is appended in Arabic to the Capital Market Law while the other part is not.

Various findings have been drawn from the previous research on developing countries reviewed in chapter 2. In addition, discussion of disclosure theories (chapter 2) and various specific issues in relation to Egypt (chapters 3 and 4) have led to prior expectations. Both the findings and the specific issues have been used in generating research questions to be investigated in this thesis.

This chapter presents the research questions which are related to issues discussed in previous chapters, and explains how the empirical research questions are converted into hypotheses for testing (section 5.2). Developments in the Egyptian environment from 1991 to 1995 (reviewed in chapter 3) provide the background to appreciating the situation in Egypt, in terms of rules and regulations and the steps taken towards their development

(chapter 4). Those rules and regulations are the basis used for developing a disclosure list relevant to Egypt for this study. The development of the disclosure list is explained in section 5.3. The hypotheses are subdivided in section 5.4. A summary is provided in section 5.5.

5.2 Research questions and hypotheses

Various findings are drawn from previous studies on developing countries as explained in chapter 2. In addition, the formation of expectations based on theory has been discussed in chapter 2. Previous disclosure studies and theoretical consideration have been used in generating research questions as follows:

5.2.1 Increase in disclosure level after the introduction of new regulations

It was found in more than one study that the level of disclosure has increased since the introduction of new regulations or standards, which are more comprehensive than their previous ones (Nicholls and Ahmed, 1995; El-Modahki, 1995; Khasharmeh, 1995). In addition there was an expectation based on theory that a *significant increase of the extent of disclosure in the annual reports of Egyptian listed companies is taking place, which could be the result of the issuance of the new CML, which mandated the IASs* (chapter 2). From these expectations the following question was generated:

- **Empirical research question 1** (from chapter 2)

To what extent did listed companies show indications of disclosing more information following the introduction of the CML ?. (this question is subdivided into six sub-questions in chapter 7).

The question can be formulated as research hypothesis H1:

H1: The disclosure indices of Egyptian listed companies in the period after the new CML was issued and mandated (1995) do not differ significantly from the indices before the CML was issued (1991). The alternative hypothesis is that the indices have increased.

5.2.2 Disclosure levels of different regulations and the effect of familiarity and language on disclosure practices

Empirical research question 2 (from chapters 3 and 4) is in three parts:

5.2.2.1 levels of disclosure (2a):

The level of disclosure in most developing countries is low and has failed to fulfil the information needs of users (e.g. Wallace, 1987 Abayo et al., 1993). In addition, from the theoretical discussion of chapter 2, the following expectations was formed.

The level of compliance is less than 100% as non-compliance costs are not very high compared to compliance costs (2a).

From the findings of previous research and the expectations based on theory, the following question was generated:

2(a) What is the level of compliance of Egyptian listed companies with the disclosure requirements of different laws and regulations (CA, CML, IASs)?

5.2.2.2 Familiarity (2b)

The expectation for 2(b) based on developments in regulation (chapter 3 and 4) and previous research (Nicholls and Ahmed, 1995), is that compliance with the established laws and regulations will be higher than with the new regulations. Lack of compliance

may be the result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure (Tai et al., 1990).

From the theoretical discussion of chapter 2 the following expectations was formed.

Familiarity with the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the established regulations will be higher than that of other parts (2b).

From the findings of previous research and the expectations based on theory, the following question was generated:

2(b) Do Egyptian listed companies differ in their level of compliance with the established laws (CA) as compared with the new regulations (CML which includes a statement which mandates the IASs)?

5.2.2.3 Language (2c)

The expectation for 2(c), based on the knowledge that accounting is taught in Egypt mainly in Arabic with minor exceptions (see chapter 3) and that there is a lack of an official Arabic translation (see chapter 4), is that compliance with the additional disclosure requirements appended to the CML in Arabic ($pCML_A$) will be higher than the IASs additional disclosure requirements not appended to the CML. The latter are the additional requirements of the IASs which have to be followed by companies according to Statement 58 of the CML. They are denoted $pIASs_{NA}$ in this research.

From the theoretical discussion of chapter 2 the following expectations was formed.

Language of the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the national regulations in Arabic will be higher than that of other parts (2c).

From the findings of previous research and the expectations based on theory, the following question was generated:

2(c) Do Egyptian listed companies differ in their level of compliance with the additional disclosure requirements of the new regulations according to the language of the requirements?

Part 2(a) of the question will be answered by exploratory data analysis. Parts 2(b) and 2(c) are formulated as research hypothesis H_2 :

H_2 : The levels of compliance with various laws and regulations do not differ significantly. The alternative hypothesis is that the levels of compliance are different.

The null and alternative forms of the sub-hypotheses **H_2** are as presented in section 5.4.2

5.2.3 The relationship between disclosure and company characteristics

In most of the previous studies (chapter 2), disclosure was found to be related to one or more company characteristics (e.g. Tai et al., 1990; Hossain et al., 1994, El-Modahki, 1995). From the analysis of theoretical implications of previous studies, the following expectations were formed:

- *The level of disclosure in the annual reports of Egyptian listed companies is positively related to a company's size (total sales and total assets).*

- *There is a significant positive association between the level of disclosure of Egyptian listed companies and share trading. Actively traded companies will disclose more than rarely traded companies.*
- *There is a significant positive association between the level of disclosure of Egyptian listed companies and legal form. Public sector companies will disclose more than private sector companies.*
- *There is a significant positive association between the IASs disclosure of Egyptian listed companies and the type of audit firm. Companies audited by one of the 'big-six' will disclose more in terms of IASs requirements than companies audited by other audit firms.*
- *There is a significant association between the levels of disclosure other than the IASs, of Egyptian listed companies and audit firm.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and gearing.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and liquidity.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and profit ratio*
- *There is a significant association between the level of disclosure of Egyptian listed companies and type of business activity.*

From these expectations the following question was generated:

Empirical research question 3 (from chapter 2)

Is there a significant association between any of the disclosure indices of a company and its characteristics?

Results of previous research have differed, depending on the country studied. Accordingly some prior expectations are formed about the direction of association where the evidence from previous work is strong (such as for the size factor). For other characteristics there are no prior expectations because of the conflicting evidence in previous work. The question can be formulated in research hypothesis H3.

H3: There is no significant association between company characteristics and the disclosure index. The alternative hypothesis is that there is a relationship between the disclosure index and company characteristics.

These are the main hypotheses. As will be explained in section 5.4 hypotheses are subdivided for detailed analysis. The next section contains an explanation of the construction of disclosure lists which lead to sub-indices and so permit testing of these hypotheses.

5.3 Construction of the disclosure list

Wallace (1987) has pointed out that disclosure has to be quantified by a valid scoring procedure. *“Financial disclosure is an abstract concept that cannot be measured directly. It does not possess inherent characteristics by which one can determine its intensity or quality like the capacity of a car. It is therefore essential, whatever scale one adopts to quantify disclosure, to provide evidence that the measures are valid and reliable by specifying the scoring procedure”*. In response to this observation it is necessary to give consideration to how disclosure may be quantified. One approach to quantifying disclosure is to investigate whether some predetermined information items are disclosed (Nicholls and Ahmed, 1995). Examples of such studies are found in Cerf (1961), Buzby (1975) Wallace (1987) and Cooke (1989a). The approach is called the ‘disclosure index’ method.

This research follows the advice of Cooke and Wallace (1989) in specifying the scoring procedure in detail. Evidence of validity is based on taking the principles of scoring from previous research and on taking the mandatory disclosure list from the laws and regulations as explained in this section. This section contains an explanation of how the disclosure list was constructed for this research and how the disclosure indices were defined. In section 5.4 the hypotheses are subdivided to link with the various indices. In chapter 6 an explanation of how the scoring was carried out and how the disclosure index was calculated is given.

One of the specific objectives of this study is to measure the level of compliance with mandatory disclosure requirements for the years 1991 and 1995 by Egyptian listed companies. A further objective is to explore any association of the level of disclosure with certain company characteristics in 1995. Mandatory disclosure is defined, as all those items are required by the relevant regulations for listed companies. The first step towards measuring the level of disclosure was to construct the mandatory disclosure scoring sheet, as explained in section 5.3.4. Before that there is a brief explanation of the reasons for choosing annual reports (section 5.3.1), an explanation of the reasons for developing a new disclosure list (section 5.3.2) and a brief summary of the relevant legislation (section 5.3.3).

5.3.1 Reasons for choosing annual reports

The empirical part of this study is based on the assumption that the annual report is the most important mechanism through which the company disseminates information to shareholders and prospective investors, and others (Hossain et al, 1994). It is acknowledged that companies frequently disclose information through other channels, such as the media, interim financial statements, and preliminary announcements to the

Stock Exchange (ibid.). However, such forms of financial information disclosure are outside the scope of the empirical part of this thesis.

The research was not limited to the financial statements only but rather was related to the entire contents of the annual report, which normally includes the following:

- Board of directors report
- Auditors' report
- Financial statements
- Explanatory notes.

5.3.2 Reasons for developing a new disclosure list

It was decided not to use an existing disclosure list (e.g. Wallace, 1987 and 1989a) despite the advantage this might yield in terms of comparability with previous studies. This is because existing lists probably ignore many items which are required to be disclosed by the most recent Egyptian regulations and the IASs relevant to the period under investigation. Therefore, such lists would not give a complete picture of mandatory disclosure. Moreover, the CA includes a small number of items which should be disclosed in the report of the board of directors. Those items can be considered specific to Egypt and might not be included in a disclosure list used for studies of other countries. Examples of these items are: future activities; current value of land if significantly different from the carrying amount in the balance sheet; donations; and exports. It was, therefore necessary to design a specific disclosure list relevant to the unique requirements of Egypt.

5.3.3 Legislation used

Given these considerations, the first step in assessing the extent of mandatory disclosure (compliance levels) must be to consider the relevant regulations with which listed companies have to comply in respect of their disclosure requirements. The relevant legislation in place during the period under investigation was discussed and explained in chapter 4. These regulations are:

- The Companies Act of 1981 and the Investment Law 230 of 1989 (which replaced the previous Investment Law 43 of 1973). These are the two legislative instruments governing investment in private companies in Egypt. It is important to note that the Investment Law does not include specific accounting disclosure requirements and leaves this matter to the CA. The Investment Law includes the cases where companies can be exempted from tax. This helps in determining the applicability of the item for the specific company.
- Listing on the Stock Exchange is governed by the Capital Market Law (CML) of 1992 and its Executive Regulations (ERs) of 1993. The CML was implemented in 1993 but became fully mandatory in 1995. The Executive regulations (ERs) of the CML required listed companies to follow the IASs in matters not included in the regulations (Statement 58).
- Public Business Sector (public sector) companies which are in the process of privatising are governed by the public Business Sector Law of 1991 which required those companies to continue applying the Uniform Accounting System (UAS). Those companies when listed in the Stock Exchange must also comply with the CML and its ERs (which require them to apply the CA, the CML and the IASs). Therefore, where the annual reports of listed public sector companies are analysed in this thesis, only

their compliance with the requirements of the CA, the CML and the IASs (Listing requirements) is assessed, without looking to their compliance with the UAS requirements.

The mandatory disclosure requirements for listed companies are comprehensive because they include the requirements of the IASs in addition to the CA and the CML. The IASs used for constructing the disclosure list were those which were extant at 1 January 1995, as published by the IASC in its annual volume of standards (1995) and in Epstein and Mizra (1997). However there were some IASs which were not relevant to this study and they have been excluded from the disclosure checklist described in the next section. The reasons for exclusion were as follows:

- Disclosure requirements duplicated in other IASs: (IAS 1 and IAS 13)
- Considerable discretion given to companies in application (IAS 14 and IAS 15)
- Not common accounting practice in the companies surveyed (IAS 17, IAS 19, IAS 20, IAS 22, IAS 26, IAS 27, IAS 29, IAS 30, IAS 31)

5.3.4 Constructing the disclosure list and sublists for analysis

A comprehensive analysis of the disclosure requirements of the CA, CML and IASs was carried out, and the following multistep procedure was followed to construct the final disclosure list used to assess the level of mandatory disclosure.

Three different disclosure lists were constructed in the first stage as follows:

- A list for the disclosure requirements of the CA.
- A list for the disclosure requirements of the CML.
- A list for the disclosure requirements of the applicable IASs.

As explained in earlier chapters, there is overlap across the laws and regulations concerning the disclosure items. In addition, parts of the IASs requirements have been required by the established regulations (CA of 1981) which means that practitioners are more familiar with them. In addition, there are parts of the IASs which were not available in an official Arabic translation at the time of this study. Therefore, segmentation into five main categories was carried out to avoid duplication in lists. Those main categories are:

1. Disclosure items which are required by the CA, the CML and the IASs (group 1).
2. Disclosure items which are required by the CML and the IASs but not the CA (group 2).
3. Disclosure items which are required by the CA and the CML but not the IASs (group 3).
4. Disclosure items which are required by the CML only (group 4).
5. Disclosure items which are required by the IASs only (group 5).

This segmentation is illustrated in Table 5.1.

Table 5.1 Illustration of segmentation of disclosure requirements by group

	Group 1	Group 2	Group 3	Group 4	Group 5
CA					
CML					
IASs					

The segmentation was carried out using the following steps:

Begin with the CA list:

- *Is the item also in the CML and the IASs? If yes, then Group 1.*
- *Is the item also in the CML but not the IASs? If yes, then Group 3*

This clears the CA list.

Then consider the remaining items in the CML list:

- *Is the item also in the IASs list? If yes, then Group 2, If no, then Group 4*

This clears the CML list.

There only remain items in the IASs list not contained in either the CA or the CML. This provides Group 5.

The theoretical combination of being required by the CA and the IASs only is not available, because the CML includes a statement requiring companies to consider the CA in all matters not included in the CML. Additionally, Statement 58 in the CML requires IASs to be taken into consideration in any matters not specifically included in the regulations. However, the ERs of the CML included a model of a statement of sources and applications of funds, which complied with IAS 7 at the time the regulations were issued. In 1994, IAS 7 was revised to require the preparation of a cash flow statement instead of the statement of sources and applications of funds. Unfortunately the ERs of the CML were not altered to be consistent with the IASs. This caused a difference between the CML and the IASs. Those two items are separated in group 4 (items relating to the statement of sources and application of funds) and group 5 (items relating to the cash flow statement).

Creating sub-indices

Items in group 1 and group 2 were then divided into 3 sections:

- Balance sheet items
- Income statement items
- General information / accounting policy items

This resulted in nine different sections in the overall disclosure list (241) items which in turn produce nine different sublists. Each sublist is used to calculate a sub-index:

Sublist 1: Balance sheet items required by the **CA+CML+IASs** (53 items)

produces sub-index **1**.

Sublist 2: Income statement items required by the **CA+CML+IASs** (13 items)

produces sub-index **2**.

Sublist 3: General information items required by the **CA+CML+IASs** (10 items)

produces sub-index **3**.

Sublist 4: Balance sheet items required by the **CML+IASs** (20 items)

produces sub-index **4**.

Sublist 5: Income statement items required by the **CML+IASs** (5 items)

produces sub-index **5**.

Sublist 6: General information, including accounting policies, required in the notes by the

CML+IASs (105 items) produces sub-index **6**.

Sublist 7: Board of directors report items which are required by the **CA + CML** (4 items)

produces sub-index **7**.

Sublist 8: Statement of sources and application of funds required by the **CML only**

(16 items) produces sub-index **8**.

Sublist 9: Cash flow statement required by the **IASs only** (15 items) produces

sub-index **9**.

From these mutually exclusive categories, three total indices were constructed:

CA index = sub-indices 1+2+3+7

CML index = sub-indices 1+2+3+4+5+6+7+8

IASs index = sub-indices 1+2+3+4+5+6+9

The combinations of total indices and their components are illustrated in Table 5.2.

Table 5. 2 Linking combination indices to sub-indices

Combination index	Sub-indices								
groups	group 1			group 2			group 3	group 4	group 5
CA	1	2	3	4	5	6	7	8	9
CML	1	2	3	4	5	6	7	8	9
IASs	1	2	3	4	5	6	7	8	9

The approach followed in the design of the disclosure list by dividing the list into 9 sublists and calculating 9 sub-indices helps to explore every change in the indices. Moreover, it can be used to avoid duplication in the indices which improves statistical and descriptive analysis.

Further consideration must be given to the CML because, as explained in chapter 4, one part of the CML disclosure requirements is items which have been required by the CA since 1981. Another part of the additional disclosure requirements is appended to the CML in Arabic. A third part of the CML disclosure requirements relates to the IASs which have not been appended to the CML and are not available in an Official Arabic translation. However, listed companies have to comply with these IASs according to statement 58 of the CML. Sublist 6 therefore was subdivided into:

- 6_a (additional disclosure requirements appended to the CML in Arabic).
- 6_b (additional disclosure requirements of the IASs which are not available in an official Arabic translation).

The CML encompasses three categories of disclosure requirements as follows:

- Disclosure requirements which are also included in the CA (sublists 1, 2, 3 and 7),
- Additional disclosure requirements which are enclosed with the regulations in Arabic (sublists 4, 5, 6_a and 8), and

- Additional disclosure requirements which have to be followed by companies but are not available in an official Arabic translation at the time of this research (sublists 6_b and 9).

Therefore the combinations shown in Table 5.3 were applied in testing the hypotheses.

Table 5.3 Combination of total and partial indices

Combination index	Sub-indices									
CA	1	2	3	4	5	6		7	8	9
CML	1	2	3	4	5	6		7	8	9
IASs	1	2	3	4	5	6		7	8	9
Partial CML (pCML)	1	2	3	4	5	6		7	8	9
Partial IASs (pIASs)	1	2	3	4	5	6		7	8	9
Partial CML (Arabic)(pCML _A)*	1	2	3	4	5	6a	6b	7	8	9
Partial IASs (Non-Arabic)(pIAS _{SNA})**	1	2	3	4	5	6a	6b	7	8	9

5.4 Subdividing the hypotheses

The following expectation has been formed from the discussion in chapter 2:

More insights and explanation of disclosure practices by Egyptian listed companies can be gained by subdividing the disclosure indices based on the annual report into its different parts and according to language and date of the regulations.

Linking the main hypotheses to the subdivisions of the disclosure list allows testing of specific groups of disclosure items and extraction of specific conclusions and testing the applicability of specific disclosure theories.

In order to identify which specific total index, partial index or sub-index may have increased or differed between companies, the hypotheses were divided into sub-hypotheses.

As a result of having total indices (CA index; CML index; IASs index), partial (pCML, pIASs, pCML_A and pIASs_{NA}) indices and having different sublists, as illustrated in section 5.3, hypotheses H1, H2 and H3 are divided into sub-hypotheses following Cooke's approach (1989a).

5.4.1 Subdividing hypothesis H1

The null forms of the sub-hypotheses H1 are as follows:

H1_{CA}: The CA disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{CML}: The CML disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{IASs}: The IASs disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{pCML}: The pCML disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{pIASs}: The pIASs disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{pCMLA}: The pCML_A disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{pIASsNA}: The pIAS_{sNA} disclosure indices of Egyptian listed companies in 1995 do not differ significantly from the indices in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub1}: Sub-index 1 (disclosure of balance sheet items required by CA + CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 1 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub2}: Sub-index 2 (disclosure of income statement items required by CA + CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 2 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub3}: Sub-index 3 (disclosure of general information items required by CA + CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 3 in 1991. . The alternative hypothesis is that the indices have increased.

H1_{sub4}: Sub-index 4 (disclosure of balance sheet items required by CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 4 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub5}: Sub-index 5 (disclosure of income statement items required by CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 5 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub6}: Sub-index 6 (disclosure of items required to be disclosed in the notes by CML + IASs) of Egyptian listed companies in 1995 does not differ significantly from sub-index 6 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub7}: Sub-index 7 (disclosure of items required by CA + CML to be disclosed in the Board of directors report) of Egyptian listed companies in 1995 does not differ significantly from sub-index 7 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub8}: Sub-index 8 (disclosure of items required to be disclosed by the CML only) of Egyptian listed companies in 1995 does not differ significantly from sub-index 8 in 1991. The alternative hypothesis is that the indices have increased.

H1_{sub9}: Sub-index 9 (disclosure of items required to be disclosed by the IASs only) of Egyptian listed companies in 1995 does not differ significantly from sub-index 9 in 1991. The alternative hypothesis is that the indices have increased.

H1_{timeliness}: The timeliness of the annual reports of Egyptian listed companies in 1995 does not differ significantly from the timeliness of the annual reports in 1991. The alternative hypothesis is that the timeliness indices have decreased.

5.4.2 Subdividing hypothesis H2

The null and alternative forms of the sub-hypotheses **H2** are as follows:

H2_{CA & CML} and H2_{CA & IASs}: The level of compliance with the disclosure requirements of the CA does not differ significantly from the level of compliance with each of the CML and the IASs. The alternative hypothesis is that the level of compliance with the CA is higher than the level of compliance with each of the CML and the IASs.

$H2_{pCMLA \& pIASsNA}$: The level of compliance with the disclosure requirements of the partial CML Arabic ($pCML_A$) does not differ significantly from the level of compliance with the disclosure requirements of the partial IASs not Arabic ($pIASs_{NA}$). The alternative hypothesis is that the level of compliance with the $pCML_A$ is higher than the level of compliance with the $pIASs_{NA}$.

5.4.3 Subdividing hypothesis H3

The null and the alternative forms of the sub-hypotheses H3 are as follows:

$H3_{assets}$: There is no significant association between size of a listed company represented by its assets and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant positive association.

$H3_{sales}$: There is no significant association between size of a listed company represented by its sales and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant positive association.

$H3_{legalform}$: There is no significant association between the legal form of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant positive association.

$H3_{sharetrading}$: There is no significant association between share trading of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant positive association.

$H3_{auditfirm(IASs)}$: There is no significant association between the type audit firm of a listed company and the IASs disclosure indices and sub-indices. The alternative hypothesis is that there is a significant positive association.

H3_{auditfirm}: There is no significant association between the type audit firm of a listed company and disclosure indices other than the IASs. The alternative hypothesis is that there is a significant association.

H3_{gearing}: There is no significant association between the gearing of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant association.

H3_{profitratio}: There is no significant association between the profit ratio of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant association.

H3_{liquidity}: There is no significant association between the liquidity of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant association.

H3_{gearing}: There is no significant association between the gearing of a listed company represented by its assets and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant association.

H3_{typeofbusiness}: There is no significant association between the type of business of a listed company and its different disclosure indices (total, partial and sub-indices). The alternative hypothesis is that there is a significant association.

5.5 Summary and conclusion

This chapter contains an explanation of how the empirical research questions have been converted into hypotheses. Disclosure theories (chapter 2), previous research (chapter 2) and various specific issues in relation to Egypt (chapter 3 and 4) have been used in

generating research questions and forming prior expectations. The process of developing a disclosure list relevant to Egypt and the segmentation of the list into nine sublists have been described in detail. Subdividing the hypotheses into sub-hypotheses has been explained in detail. This is a development of Cooke's approach in a way which makes it relevant to the Egyptian situation.

This thesis can be considered a contribution to the literature of measuring accounting disclosure through the development and subdivision of the disclosure list. The developed list is a comprehensive mandatory disclosure list, which can be used by other researchers or by the authorities in Egypt and can be updated easily. The subdivision of the disclosure list of items required by the IASs into those items which are also required by established national regulations and those which are not specified in national regulations enables testing for familiarity. The items not specified in national regulations have been subdivided further according to whether or not there is an official translation into the local language. This detailed subdivision allowed the calculation of particular disclosure indices to match particular research hypotheses and therefore a more thorough analysis of disclosure issues. This approach can be followed by other researchers in the field of disclosure index research.

Selection and collection of the sample and a summary of research methods are represented in chapter 6.

CHAPTER 6

6. RESEARCH METHODS

6.1 Introduction

The purpose of this chapter is to outline the research methods followed in the empirical part of this research. Selection of the research sample is explained in section 6.2.

Measuring disclosure are explained in section 6.3. Data examination and the statistical tests to be used in testing the research hypotheses are explained in sections 6.4 and 6.5 respectively. The explanatory variables are summarised in section 6.6. Section 6.7 summarises the chapter.

6.2 Selection of sample and collecting the annual report

Listed companies on the Egyptian Stock Exchange represent the population for this research study. This section gives details of listed companies and the unique character of the Egyptian Stock Exchange.

It was explained in chapter 3 that the Egyptian Stock Exchange had around 700 listed companies in 1995. Of these around 100 are traded. Other companies are rarely or never traded companies which were listed under the provisions of the previous regulations or listed for tax exemption offered by tax law for listed companies. This resulted in a large number of companies being listed only for tax purposes. Traded companies are those companies which are listed in the Stock Exchange to raise capital. For these companies public disclosure is an important matter. Therefore, it can be said that the Egyptian Stock Exchange contains two major groups:

- Traded companies (100)
- Rarely traded companies (600)

Initially, 50 of the traded companies were contacted by letters requesting their annual reports. Only three replied. Another sample of 50 rarely traded companies was contacted. Only four companies replied. Both samples were chosen randomly after excluding banks and insurance companies. These were excluded from the sample because they report under a different statutory basis.

Generally, it is very difficult to obtain annual reports of private companies in Egypt. In principle, annual reports of listed companies can be obtained from the Capital Market Authority (CMA) but in practice it requires personal visits and much persistence. The CMA was contacted by a letter asking for the annual reports of the most actively traded stocks. At the beginning there was no reply. Several follow-up letters were sent. Finally the CMA sent a computer printout of a brief version of the balance sheet and the profit and loss account without any detail or explanatory notes, which contains the accounting policies followed in preparing the financial statements. This meant the material could not be used for the purpose of the analysis.

Twenty financial analysts in Egypt were contacted by a letter sent by fax asking for the annual reports of the most actively traded companies in the Egyptian Stock Exchange. None of them responded because it seems that they impose a charge in responding to such requests.

On a subsequent visit to Egypt by the researcher, the CMA was asked for the annual reports of selected companies. Unfortunately, what was offered was the brief version which was earlier sent by post. This is because the CMA has this brief version stored in the computer system. The detailed annual reports were filed manually in the Archive

which made it very difficult and time consuming to obtain the annual reports. Not all the annual reports were available. After gaining permission, 120 annual reports were collected by the researcher and copied from the CMA archive. However not all of them were complete. The annual reports of 72 companies were found complete for the period after October 1995, so far as the financial statements and notes to the accounts were concerned, but only 53 of these had the report of the board of directors attached. Of those 72 companies, in 20 cases there was a matching set of their annual reports for the periods before and after the issue of the CML (the years are 1991 and 1995). Of these 20, there were 17 which had the report of the board of directors attached. More annual reports have been collected by the researcher for the selected companies in respect of other periods (1990, 1993 & 1994) but there was no matching annual report for these companies for the period after October 1995. Consequently they were not included in the analysis.

6.3 Measuring disclosure

This section contains an explanation of the approach followed in this study (section 6.3.1), the scoring method (6.3.2 and 6.3.3) and the reasons for using unweighted scores (section 6.3.4), supported by evidence from previous research.

6.3.1 Approach followed in this study

Once the disclosure list was developed as explained in chapter 5, a scoring sheet was prepared to assess the level of disclosure exhibited by each company. Then a disclosure index was built for each company and for each disclosure item. The disclosure index “*is a measure by which the level of financial reporting of one company can be compared with another. It can also be used to measure the degree of disclosure of an item of information by enterprises within a country and is the ratio of actual scores awarded to*

the company and the scores which that company is expected to earn” (Wallace, 1987 p.450).

This study takes the commonly used approach of giving the item a disclosure score 1 if it is disclosed and 0 if it is not disclosed (see for example; Firth, 1980; Cooke, 1989a; Wallace, 1987). It is acknowledged that other methods have been used (e.g. specificity; Robbins and Austin, 1986; comprehensiveness; Wallace et al, 1994).

To reduce subjectivity in determining the applicable items, the whole annual report was read first to make a judgement about whether a particular item was relevant as suggested by Cooke (1989a, 1991, 1992 and 1993) and followed by Hossain et al (1994) and Nicholls and Ahmed (1995). As a result, a company was not penalised for not disclosing an item which was deemed to be irrelevant to its activities.

6.3.2 Scoring method

Following previous research, each financial report was scored as follows:

- 1 point is awarded for the disclosure of an item in the financial statement or another part of the annual report (such as the explanatory notes, the auditors’ report, or the board of directors’ report).
- 0 point is awarded for non-disclosure where there are indications that there should be a disclosure.
- 'Not applicable' is used where there is non-disclosure but no indication that there should be a disclosure.

Then the disclosure index, for each company and for each item, was calculated as the ratio of the total actual score awarded to the maximum possible score applicable for that item or company using the following formula (Cooke, 1992):

$$I_j = \frac{1}{n_j} \sum_{i=1}^{n_j} x_{ij}$$

Where n_j = number of relevant items for the company j , $n_j \leq 241$.

x_{ij} = 1 if i th (relevant) item is disclosed.

= 0 if i th (relevant) item is not disclosed.

so that $0 \leq I_j \leq 1$

6.3.3 Examples of procedures followed in scoring

Previous research has indicated some of the practical problems encountered in scoring. The most significant problem is to decide whether a missing item is 'applicable but not disclosed' or is 'not applicable'. Following Cooke (1989a) the annual report was read as a whole in order to gain an impression about the items which were likely to be applicable in the context of the company.

Examples of the procedures followed in this research are as follows:

- If a company has been formed under the Investment Law or under the CA in circumstances, this means that it will be exempted from tax for 5 or 10 years. By knowing the starting date of business of the company, the researcher may form a conclusion as to whether or not the company remains exempt from tax.
- If a company has long-term deposits, it should disclose annual interest received.

- If a company has no investments, this means that all items relating to investment are 'not applicable'.
- If a company has long-term debts it should disclose the proportion due in less than one year's time and other details of these debts.
- If a company has losses, it may be concluded that it will not declare dividends.
- Where the company discloses a total amount of investment in other companies, without giving details of those companies, it is difficult to decide whether the investments are listed or not and whether they are traded or rarely traded. It was thought safer to assume that the investments were either unlisted or rarely traded, unless indicated as being traded. This means the company is not penalised for failing to disclose the market value of the investment. The reason is that out of the 700 listed companies, there are 600 which are rarely traded and therefore have little difference between book and market value.

6.3.4 Unweighted scoring

To avoid subjectivity in judging that one item was more important than another, the study relied on an unweighted score approach, which gives the same importance to all disclosure items because the research questions were concerned with the level of disclosure rather than the importance of disclosure (Belkaoui, 1994). Such an approach was adopted by many previous studies e.g. Wallace (1988), Cooke (1989a), Abayo et al. (1993), Belkaoui (1994) and Hossain et al (1994). Any method of assigning weights to individual disclosure items may be misleading because the importance of any disclosure item varies from company to company, industry to industry and time period to time period (Spero, 1979). Also Robbins and Austin (1986), Cooke (1989a, b and c and 1991), Cooke and Wallace (1989), Marston and Shrivs (1991) and Abayo et al. (1993) supported not attaching weights to disclosure items.

Marston and Shrives (1996) offered an explanation of the reason why earlier studies e.g. Cerf, 1961; Buzby, 1974 and 1975; Barrett, 1976 tended to use weights, suggesting that these papers used a smaller number of items in the disclosure lists whereas later researchers, such as Chow & Wong-Boren (1987), Cooke (1989a, 1991 and 1993) and Raffournier (1995), had more detailed and longer disclosure lists, hence the need to consider weightings disappears (with some exceptions such as Malone et al., 1993).

Chow and Wong-Boren (1987) reported that the choice of an unweighted score over a weighted score did not produce substantially different results. In their study, an unweighted score was calculated alongside the weighted score for each Mexican company. A significant correlation was found between weighted and unweighted scores and between both scores and each of firm size and financial leverage¹.

6.4 Data examination

Once the indices were calculated for each company and the characteristics were also summarised in matching columns, the variables were reviewed. Since many statistical tests are based on the assumption that the data comes from a normal distribution, the following plots and tests were carried out to review the data:

- Stem-and-Leaf Plot
- Kolmogorov-Smirnov (K-S) test with Lilliefors significance.

The following sections explain each briefly.

¹ However, this result has to be taken by caution as weighted and unweighted index numbers cannot be guaranteed to agree closely in all circumstances (Wallace and Naser, 1995).

6.4.1 Stem-and-Leaf Plot

A Stem-and-Leaf Plot provides more information about the actual values than does a histogram. In a histogram, the length of each row corresponds to the number of cases that fall into a particular interval. However, a Stem-and-Leaf Plot represents each case with a numeric value that corresponds to the actual observed value. This value has two components, the leading digit (stem) and the trailing digit (leaf). Also, the last row of the Stem-and-Leaf Plot is for cases with extreme values (Norusis, 1993).

6.4.2 Kolmogorov-Smirnov test (K-S) with Lilliefors significance

This is one of the commonly used tests. It is based on a modification of the Kolmogorov-Smirnov test which is used when means and variances are not known but must be estimated from the data. The K-S test is a test of goodness of fit. That is, it used to determine how well a sample of data fits a particular distribution (e.g. normal), using the following hypotheses:(Norusis, 1993)

H_0 : data are assumed to be normally distributed.

H_1 : data are assumed not to be normally distributed.

From data screening some variables were found to be normally distributed and others not. Therefore, it was decided to use mainly non-parametric tests supported by some parametric tests where appropriate.

6.5 Statistical tests used in testing the hypotheses

Hypotheses H1 and H2 are tested using:

- Wilcoxon Matched-Pairs Signed Ranked test
- Matched-Pairs t test

Hypothesis H3 is tested using both univariate and multivariate analysis:

6.5.1 Wilcoxon Matched-Pairs Signed Ranked test

This is a non-parametric procedure which involves determining whether the computed sum of signed ranks is significantly higher than zero (one-tailed). This test is more powerful than the sign test because it incorporates information about the magnitude of the differences (Norusis, 1993).

6.5.2 Matched Pairs t test

This is a parametric test which considers the differences in indices between the two periods.

$$H_0 : M_d \leq 0$$

$$H_1 : M_d > 0$$

M_d is the mean of the index differences for the population of listed companies. In matched pairs design, both periods are tested for the same companies. This design often leads to a smaller sampling error than independent sample design by eliminating variation between companies as a source of error (Anderson et al, 1993).

6.5.3 Univariate analysis

For continuous independent variables, the effects of possible individual company characteristics on disclosure indices were examined one at a time by computing correlation coefficients (Hossain et al., 1994). The Pearson product-moment correlation is appropriate only for data that attain at least interval level of measurement. Normality is also assumed when testing hypotheses using this correlation coefficient. For ordinal

data or interval data that do not satisfy the normality assumption another measure of linear relation between two variables, Spearman's rank correlation coefficient, is appropriate (Norusis, 1993).

Since the continuous variables tested in this research are not normally distributed, Spearman's rank correlation coefficient was mainly used for univariate analysis of these variables. Rank correlation is used to determine whether variables move together, that is, whether high ranks of one variable are associated with high ranks of the other (positive correlation), whether low ranks of one variable are associated with high ranks of the other (negative correlation), or whether the ranks in the two variables are unrelated (not significant).

For categorical independent variables, the effects of possible individual company characteristics on disclosure indices were examined by using the Wilcoxon-Mann-Whitney test on each of the four variables in turn.

6.5.4 *Multivariate analysis*

Multiple regression analysis was used in multivariate analysis in this research. Transformation of data is useful if the assumptions of the standard Ordinary Least Square (OLS) are not entirely fulfilled. Because of the non-normality of the distribution of most of the dependent and independent variables conventional OLS was not preferable.

In the case of disclosure studies, disclosure indices are metric ratios and therefore can be legitimately transformed, where necessary, and used in regression analysis (Cooke, 1998).

A recent development in dealing with distribution problems is to transform the data and use Rank Regression rather than conventional OLS. This approach was used in

disclosure studies by Lang and Lundholm (1993), followed by Wallace et al (1994); Wallace and Naser (1995) and Cooke (1998). These studies transformed data into ranks first, then, regression was run on the ranked variables. Gray et al (1998) used the alternative approach which is running rank robust regression (non-parametric) regression, which is available on Minitab.

Rank transformation is useful in some cases because, according to Cheng et al., 1992 (as cited in Wallace et al, 1994):

- It yields distribution-free data.
- It is insensitive to outliers (Gray et al., 1998 also, Cheng et al., 1992).
- It provides results similar to those which can be derived from ordinal transformation.
- It mitigates the impact of measurement errors, outliers and residual heteroscedasticity on regression results.
- It is useful when the relationship between the dependent and independent variables is not strictly linear and there is no theoretical basis for suggesting a relationship between y and x (Cooke, 1998).

In spite of these advantages, rank regression has some inherent weaknesses which are summarised (Cooke, 1998) as follows:

- Beta coefficients (B_i) from rank regression are difficult to interpret for most values
- Since ranks are distribution free, testing for significance using the f and t tests are not appropriate.
- The error structure cannot be normal.
- It is weaker than parametric tests.

Consequently, Cooke (1998) suggested the use of normal scores as an extension to the use of ranks to eliminate some of the weaknesses while retaining the advantages. This

approach is referred to as the Van der Waerden approach, as cited in Cooke, 1998. It was previously used in medical research (e.g. Morgan, 1992 in Cooke, 1998) and first applied in disclosure studies by Cooke (1998). “The transformation proposed is achieved by dividing the normal distribution into the number of observations plus one segment on the basis that each segment has equal probability”(Cooke, 1998)². The regression analysis would then proceed using the normal scores of the dependent and independent variables.

The advantages of replacing ranks by normal scores are summarised in the following as listed in (Cooke, 1998):

1. Significance levels can now be determined.
2. The F and *t* tests are meaningful.
3. The regression coefficients (B_i) derived using normal scores are meaningful.
4. The approach offers a means whereby a non-normal dependent variable may be transformed into a normal one and as such offers a further advantage over ranks.
5. The approach has the same advantages as ranks when there are problems of monotonicity and non-linearity, and when there is non-linearity with data concentration, normal scores disperse that concentration.

It is recommended by Cooke (1998) that “several approaches can be undertaken to try to ensure that the results are not method-driven but are robust across methods..... Whether normal scores are better than ranks in dealing with problems of monotonicity and non-linearity depends on the structure of the data”. Therefore the data in this research was analysed using both rank regression and regression based on normal scores.

² For example, if there are six observations the normal distribution would be divided into seven equally probable parts so that the original values are replaced by normal scores (here -1.0676, -0.5659, -0.1800, 0.1800, 0.5659, 1.0676) rather than ranks 1,2,...,6.”(Cooke, 1998).

Rank scores used in this research are calculated using the following formula (Lang and Lundholm, 1993, p.264):

$$\text{percentile rank} = (\text{rank} - 1) / (\text{number of companies} - 1)$$

This conversion yields a firm's rank within the sample, so that the lowest-ranking company receives a zero and the highest-ranking company receives a one. Percentile ranks are used in the regression rather than raw ranks because percentiles are independent of the maximum rank and therefore more general (Wallace and Naser, 1995).

The multiple regression routines were tested using stepwise search on SPSS. This allows the researcher to see at what stage company characteristics (independent variables) are incorporated into the regression equation and their importance (Cooke, 1989a and Norusis, 1993).

Choosing a model:

One of the commonly used measures of the goodness of fit of a linear model is called R^2 or "coefficient of determination". If there is no linear relationship between the dependent and independent variables, R^2 is 0. The statistic adjusted R^2 ($_{adj}R^2$) attempts to correct R^2 to more closely reflect the goodness of fit of the model in the population. Also, R^2 can be explained as the proportion of the variation in the dependent variable "explained by" the model (Norusis, 1993).

Another measure of goodness of fit is the mean square error (MSE). Bails and Pepper (1993) suggest that since the mean square error addresses both efficiency and bias issues, the researcher might estimate several alternative models over a given time period and compare the mean square errors associated with each of these models.

6.6 Explanatory variables

The variables which were chosen to be tested as company characteristics were explained in detail in chapter 5 and are summarised here. The company characteristics include four categorical variables and five continuous variables. In addition, timeliness is added as a characteristic for testing, as discussed in chapter 5. This section describes the measurement of each characteristic.

6.6.1 *Categorical independent variables*

The categorical variables are defined as follows:

- Legal form is represented by a dummy dichotomous variable of 1 if the company is a public (governmental) company and 0 if it is a private company. It should be noted that the public companies had a listing in 1995 as part of the privatisation programme but they were not listed in 1991. However they were required to follow the Companies Act in 1991 (see more detailed explanation in chapter 4).
- Share trading in the stock exchange is represented by a dummy dichotomous variable of 1 if the shares are traded and 0 if the shares are rarely traded.
- Type of business activity is represented by a dummy dichotomous variable of 1 if the company is industrial and 0 if non-industrial.
- Audit firm is represented by a dummy dichotomous variable of 1 if the company is audited by one of the 'big six' and 0 if audited by any other firm.

6.6.2 Continuous independent variables

The continuous variables are measured as follows:

- Profit ratio is measured as the ratio of pre-tax profit to shareholders' equity at the balance sheet date.
- Gearing is measured as the ratio of the book value of long-term debts to shareholders' equity at the balance sheet date.
- Sales are measured as the 'net sales', meaning sales net of any returns.
- Assets are measured as the book value of total assets at the balance sheet date.
- Liquidity is measured as the ratio of current assets (after deducting inventory) to current liabilities.

6.6.3 Timeliness

Another characteristic used in previous research (chapter 5) is the timeliness of the annual report. For this research the timeliness of the annual report was taken as being the difference (in months) between the financial year-end and the date of publication of the annual report. The publication date was taken to be either the date of the report of board of directors or the date of the audit report, whichever was later. Although this is a conservative approximation to timeliness, as it ignores the delay caused by printing and discussion, it is the most accurate measure that is readily available (Abayo et al., 1993).

6.7 Summary and conclusion

This chapter has outlined the research methods followed in the empirical part of this research. Selection and collection of the sample have been explained in detail, highlighting two important points:

- At the time of undertaking the research, collecting full annual reports of Egyptian listed companies was difficult, especially because the CMA's computer system stored only a brief version of the reports. It may well have improved since that time.
- Although in 1995 there were around 700 listed companies in the Egyptian Stock Exchange, only around 100 were frequently traded. The rest were rarely traded, as most of them were either listed under the provisions of the previous listing regulations or listed to be eligible for the tax exemption offered by the Egyptian law to listed companies.

Data examination and statistical tests used in testing research hypotheses have been explained in detail. Since the data contained a number of variables which are not normally distributed, non-parametric tests are the main type used and reported in this research. Parametric tests are also used where appropriate. The main tests used in this research are:

- Kolmogorov-Smirnov test (Lilliefors sig.).
- Wilcoxon-Matched Pairs test.
- Paired samples t test.
- Spearman rank correlation.
- Mann-Whitney test.
- Rank regression and regression on Normal scores.

The research methods explained in this chapter are used in chapters 7, 8 and 9. In chapter 7 the change in accounting disclosure practice by analysing two matching sets (1991 & 1995) of the 20 Egyptian companies is measured. The full set of the 72 companies is analysed in chapters 8 and 9 to test more thoroughly the relationship between the various disclosure indices and companies' characteristics after the implementation of the CML in 1995.

CHAPTER 7

7. CHANGES IN DISCLOSURE IN RESPONSE TO DEVELOPMENTS IN REGULATION OF FINANCIAL DISCLOSURE

7.1 Introduction

The purpose of this chapter is to report and analyse the results of the evaluation of the annual reports of 20 Egyptian listed companies for two periods either side of the issue of the new Capital Market Law. For each company, one report related to the year ending December 1991 or June 1992 and the other to the year ending December 1995 or June 1996 (hereafter referred to as 1991 and 1995 respectively). The purpose of comparing 1991 and 1995 annual reports is to answer the empirical research question 1 stated in section 1.5 in chapter 1 (which meets the specific research objective 1, section 1.3.1):

An expectation based on theory was formed in chapter 2 that a *significant increase of the extent of disclosure in the annual reports of Egyptian listed companies is taking place, which could be the result of the issuance of the new CML, which mandated the IASs*. In addition, It was found in more than one study that the level of disclosure has increased since the introduction of new regulations or standards, which are more comprehensive than their previous ones (Nicholls and Ahmed, 1995; El-Modahki, 1995; Khasharmeh, 1995). From these expectations the following question was generated:

- **Empirical research question 1**

To what extent did listed companies show indications of disclosing more information following the introduction of the CML ?.

This question is divided into the following sub-questions:

- 1(a)** What is the level of compliance by Egyptian listed companies with the requirements of the CA in 1991 and 1995?
- 1(b)** What is the extent to which these companies made voluntary disclosure in 1991 of additional items which were known to exist in the IASs or subsequently were incorporated in the CML?
- 1(c)** What is the extent to which these listed companies responded to the additional disclosure requirements of the CML and IASs after these became mandatory?
- 1(d)** Is there any significant increase in the various disclosure indices?
- 1(e)** Is there any significant increase in the sub-division of disclosure indices (sub-indices)?
- 1(f)** Is there any difference in the timeliness of annual report as another measure of improvement in disclosure (Abayo et al., 1993)?

This research question was transformed into research hypothesis 1 in chapter 5.

The question can be formulated as research hypothesis H1:

H1: The disclosure indices of Egyptian listed companies in the period after the new CML was issued and mandated (1995) do not differ significantly from the indices before the CML was issued (1991). The alternative hypothesis is that the indices have increased.

The chapter also contains reports on testing hypothesis H1 in two stages:

- Stage 1: the total indices and the partial indices in section 7.3.
- Stage 2: Sub-indices 1 to 9 in section 7.4.

In section 7.2, companies in the sample are explained in detail. Section 7.5 relates change in disclosure indices to specific disclosure items. The timeliness of the audit report is tested for any significant difference between the two periods in section 7.6. The results are summarised in section 7.7.

7.2 The companies in the sample

The sample of 20 matched pairs of annual reports, collected in the manner explained in chapter 6, includes the accounts of two service and 18 industrial companies. Within the sample, 17 have their shares actively traded in the stock exchange and three are less actively traded. Seven of the companies are public sector companies and 13 are from the private sector. The companies vary greatly in size, ranging from E£3m to E£156.4m in total shareholders' equity for the 1991 accounts and from a negative equity of E£1.1m to positive equity of E£681.6m for the 1995 accounts. Total assets of the sample of companies ranged from E£1.68m to E£1,612m for the 1991 accounts and from E£3.87m to E£2,373m for the 1995 accounts. Also there is a wide range of profitability. Pre-tax profits / losses ranged from a loss of E£3.19m to a profit of E£64.6m for the 1991 period and from a loss of E£74.1m to a profit of E£280m for the 1995 period.

7.3 Testing hypothesis H_1 (stage 1: total indices and partial indices)

This section reports on stage 1 testing of hypothesis H_1 (sub-hypotheses H_{1CA} , H_{1CML} , H_{1IASs} , H_{1pCML} , H_{1pIASs} , H_{1pCMLA} , $H_{1pIASsNA}$).

H_1 “The total disclosure indices (CA, CML and IASs) and partial indices (pCML, pIASs, pCML_A and pIASs_{NA}) of Egyptian listed companies in the period after the new CML was issued and mandated (1995) do not differ significantly from the indices before the CML was issued (1991)”. The alternative form of the hypothesis is that the indices have increased in the 1995 annual reports.

7.3.1 Descriptive statistics of the three total indices (CA, CML and IASs)

This section contains a discussion of the descriptive statistics of the three total indices in both periods. Table 7.1 summarises the descriptive statistics of these indices.

Table 7. 1 Descriptive statistics of CA, CML and IASs indices in 1991 and 1995

	CA score		CML score		IASs score	
	1991	1995	1991	1995	1991	1995
mean	.92	.95	.73	.84	.76	.84
std.deviation	.04	.03	.06	.09	.05	.07
minimum	.83	.89	.63	.72	.67	.76
maximum	.98	.98	.85	.97	.85	.98
median	.93	.95	.72	.86	.76	.83

Table 7.1 shows an increase in the mean, minimum and the median of CA (1981) indices. This increase cannot be explained by changes in the regulation because the CA was a requirement at each date. However, it could be explained by companies having an increased interest in external disclosure after the change in economic policy towards privatisation, which led to a large increase in the activities of the Stock Exchange (see

chapter 3). The minimum index increased from .83 to .89. The median increased from .93 to .95 but the maximum is the same (.98) in both periods. This means that the worst companies improved their CA disclosure index as a response to the changes, while for other companies it was nearly the same.

No company obtained an index of 100%. The reason for this is that even the best companies failed to disclose, in the report of the board of directors, the current value of land where there is a great difference between the market value and the book value. This point will be discussed in detail later in section 7.5.1.

On the other hand, Table 7.1 shows a larger increase in the mean, minimum and median of both the CML and the IASs indices. This increase can be explained by the change in regulations mandating the CML and IASs. Companies responded to this change. It was explained earlier in chapter 3 that Laws are better respected in Egypt than are recommendations by professional organisations. Therefore companies responded to the new regulations and there was no mention of the Egyptian standards in the annual reports of the companies. The range widened and the standard deviation increased, reflecting greater diversity in companies' reactions to the new regulations.

It is interesting to note that in 1991, the sampled companies disclosed on average 73% of the items which subsequently became CML disclosure requirements and 76% of the IASs disclosure requirements before these were made mandatory. This resulted from the similarities of part of the disclosure requirements of the CA, CML and the IASs as explained in chapter 4. Therefore, it is important to calculate the disclosure levels of the additional requirements of the CML and the IASs which are not required by the CA, in order to estimate the levels of 'voluntary' CML indices and 'voluntary' IASs indices as they were in 1991. These indices will be called 'partial CML' (pCML) index and 'partial IASs' (pIASs) index.

7.3.2 Descriptive statistics of the partial indices (pCML and pIASs)

In this section descriptive statistics of the additional requirements of the partial CML and the partial IASs which are not included in the CA are discussed. The pCML and pIASs in 1991 represent the voluntary disclosure made by Egyptian listed companies at that time. Table 7.2 summarises the descriptive statistics of these indices.

Table 7.2 Descriptive statistics of the partial indices (pCML and pIASs)

	pCML		pIASs	
	1991	1995	1991	1995
mean	.41	.65	.41	.61
std.deviation	.17	.24	.12	.17
minimum	.19	.33	.24	.36
maximum	.78	.95	.63	.94
median	.40	.65	.45	.56

Table 7.2 shows that in 1991, Egyptian listed companies disclosed 41% of the disclosure items required by the CML and the IASs before these became mandatory. This suggests that there were sources of knowledge through which those companies knew these items and disclosed them. It is important to emphasise that some of these companies probably disclosed the items required by the IASs without necessarily knowing that the items were IASs requirements. In chapters 3 and 4 those sources of knowledge are explained in detail e.g.:

- Correspondents of international accounting firms in Egypt.
- Education of practitioners in the UK and the USA.
- The UAS which is extensive and requires some disclosure items from public sectors companies similar to the IASs.
- Egyptian accounting standards.

The levels of disclosure of these items have increased greatly (from 41% to 65% and from 41% to 61%) in the pCML and in the pIASs respectively. This is a response from listed companies to these new regulations.

As explained in previous chapters, some of the additional requirements of the new CML are appended to the law in Arabic. The index of these items is called partial CML Arabic (pCML_A). The other part of the additional requirements required by the IASs and not appended to the CML has to be disclosed also by listed companies according to statement 58 of the CML. For this research these additional requirements are called partial IASs not Arabic (pIASs_{NA}), as these items are not available in Arabic to the companies. The non-availability of a translation was a concern expressed in the auditors' reports of a number of companies (chapter 4). These indices are explored in the next section.

7.3.3 Descriptive statistics of the partial indices (pCML_A and pIASs_{NA})

In this section descriptive statistics of the pCML_A and pIASs_{NA} are discussed.

Table 7.3 Descriptive statistics of the partial indices(pCML_A and pIASs_{NA})

	pCML _A		pIASs _{NA}	
	1991	1995	1991	1995
mean	.41	.65	.04	.25
std.deviation	.17	.25	.09	.38
minimum	.19	.33	.00	.00
maximum	.78	.96	.33	1.00
median	.39	.65	.00	.00

Table 7.3 shows that the pCML_A items were more common in the annual reports of Egyptian listed companies in 1991 (pCML_A 41% and pIASs_{NA} 4%). Also the response of Egyptian listed companies to the first was much greater than to the latter. This suggests that the language barrier has an effect on disclosure. This matter is explored further in chapter 8 with a larger sample.

7.3.4 Testing the differences in the CA, CML and IASs indices

($H1_{CA}$, $H1_{CML}$ and $H1_{IASs}$)

As explained in chapter 6, the Wilcoxon-matched-pairs signed ranks test and the paired samples t test were used in the testing. The results of both Wilcoxon and t tests are reported in table 7.4.

Table 7. 4 Wilcoxon matched-pairs signed ranks test and paired samples t test

Testing before / after	Wilcoxon matched-pairs signed ranks test					Paired samples t test		
	No of cases Rb<Ra	No of cases Rb>Ra	No of ties	Z	1-tail p	t	df	1-tail sig.
$H1_{CA}$	16 (11.44)	4 (6.75)	0	-2.9119	.0018	2.94	19	.004
$H1_{CML}$	18 (11.50)	2 (1.50)	0	-3.8079	.0001	5.73	19	.000
$H1_{IASs}$	19 (10.00)	0 (0.00)	1	-3.8230	.0001	4.99	19	.000
Key: Rb = rank of index before Ra = rank of index after (...) = mean rank								

As shown in Table 7.4, both the Wilcoxon and the t tests confirmed a statistically significant increase in each of the three total indices. Using the Wilcoxon matched-pairs test, the mean ranks of the CA, CML and IASs indices in 1995 were significantly higher than the mean ranks in 1991 (1-tailed $p = .0018$, .0001 and .0001 respectively). Using the t test, the mean CA, CML and IASs indices in 1995 were significantly higher than the mean indices in 1991 (1-tailed sig. = .004, .000 and .000 respectively). This supports rejecting the null form and accepting the alternative form of hypotheses $H1_{CA}$, $H1_{CML}$ and $H1_{IASs}$.

7.3.5 Testing the differences in the partial indices ($pCML$, $pIASs$, $pCML_A$ and $pIASs_{NA}$).

The results of both Wilcoxon and t tests are reported in table 7.5.

Table 7.5 Wilcoxon matched-pairs signed ranks test and paired samples *t* test

	Wilcoxon matched-pairs signed ranks test					Paired samples <i>t</i> test		
	No of cases Rb<Ra	No of cases Rb>Ra	No of ties	Z	1-tail p	<i>t</i>	df	1-tail sig.
H1 _{pCML}	19 (10.79)	1 (5.00)	0	-3.7333	.0001	5.17	19	.000
H1 _{pIAS}	18 (11.22)	2 (4.00)	0	-3.6213	.0001	4.52	19	.000
H1 _{pCMLA}	19 (10.79)	1 (5.00)	0	-3.7333	.0001	5.22	19	.000
H1 _{pIASsNA}	8 (6.75)	3 (4.00)	9	-1.8671	.0309	2.27	19	.017
Key: Rb = rank of index before Ra = rank of index after (...) = mean rank								

The results of both Wilcoxon and *t* tests reported in table 7.5 tests confirmed a statistically significant increase in each of the four partial indices.

More insight in the increase of the total and partial indices can be obtained by analysing the sub-indices.

7.4 Testing hypothesis H₁ (stage 2)

This section reports on stage 2 testing of hypothesis H₁ by sub-indices (H1_{sub1...9})

“The disclosure sub-indices (sub-indices 1 to 9) of Egyptian listed companies in the period after the new CML was issued and mandated (1995) do not differ significantly from the sub-indices before the CML was issued (1991)”.

7.4.1 Descriptive statistics of the nine sub-indices (1...9)

The disclosure items included in each sub-index were explained in detail in chapters 4 and 5. In this section descriptive statistics of the nine sub-indices (1...9) are presented. It was explained in chapter 6 that sublists 1, 2, 3 and 7 have been required by the CA since

1981. On the other hand, sublists 4, 5, 6, 8 and 9 contain items which have been mandatory only since 1993, allowing a transition period up to October 1995. As a result a higher level of indices is expected in 1, 2, 3 and 7 compared with 4, 5, 6, 8 and 9. Tables 7.6 and 7.7 summarise the descriptive statistics of the sub-indices. It will be noted that sub-index 5 is not included in the analysis. This is because of the small number of applicable companies (2 companies only). Therefore statistical analysis cannot be performed.

Table 7. 6 Descriptive statistics of sub-indices 1 to 4 in 1991 and 1995

	sub-index 1		sub-index 2		sub-index 3		sub-index 4	
	Balance sheet items CA + CML + IASs		Income statement items CA + CML + IASs		General information items CA + CML + IASs		Balance sheet items CML + IASs	
	1991	1995	1991	1995	1991	1995	1991	1995
mean	.95	.97	.94	.95	.89	.94	.75	.82
std.deviation	.05	.03	.08	.08	.13	.08	.32	.27
minimum	.83	.90	.71	.71	.71	.71	.00	.00
maximum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
median	.96	1.00	1.00	1.00	.96	1.00	.92	1.00

Table 7. 7 Descriptive statistics of sub-indices 6 to 9 in 1991 and 1995

	sub-index 6		sub-index 7		sub-index 8		sub-index 9	
	Items in the notes CML + IASs		Board of Directors report CA + CML		St. of sources and application of funds CML only		Cash flow statement IASs only	
	1991	1995	1991	1995	1991	1995	1991	1995
mean	.55	.76	.69	.67	.15	.50	.00	.23
std.deviation	.21	.15	.19	.18	.37	.51	.00	.41
minimum	.25	.46	.33	.50	.00	.00	.00	.00
maximum	.91	1.00	1.00	1.00	1.00	1.00	.00	1.00
median	.57	.74	.67	.67	.00	.50	.00	.00

As shown in Table 7.6 and Table 7.7, there is a general increase in the mean, median, minimum and maximum of all sub-indices except that trends in sub-indices 2 and 7 are less clear. The increase in the sub-indices 6, 8 and 9 can be explained by the change in regulations between 1991 and 1995, as they are parts of the disclosure requirements of the new CML and the IASs. The increase in the sub-indices 1 and 3 can be explained partly

by the increased interest shown towards external disclosure because of the changes of the economic policy, as they are parts of the disclosure requirements of the CA as well as the CML and the IASs (group 1, see chapter 6). The new economic policy of privatisation implies an increase in the ownership base from either the founders or the government to a larger number of shareholders. One of the explanations of the increase in disclosure requirements of established regulations might be the reduction of agency costs. Therefore the increase in sub-indices 1 and 3 can be justified from the aforementioned explanation. Subindex 2 (income statement items required by the CA, CML and IASs) was already high in 1991 and so an increase in 1995 is less likely. Subindex 7 (Board of Directors report disclosure items required to be disclosed by the CA + the CML) has a median and standard deviation which were approximately the same (difference within 2%) in 1991 and 1995. On the other hand, the minimum value of sub-index 7 increased from .33 to .50. This means that the worst companies improved their board of directors report as a reaction to the changes in economic policy and the SE activities, while for other companies it was nearly the same.

From the 20 companies, only three companies prepared a statement of sources and applications of funds (sublist 8) in both periods. In 1995, the same companies and nine others prepared a statement of sources and use of funds. No company prepared a cash flow statement (sublist 9) in 1991. Only five companies prepared it in 1995. It is likely that the lack of access to an approved Arabic translation of the IASs (see chapter 4) and the lack of knowledge of the most recent development of the IASs are the main reasons for the relatively smaller reaction by the companies to the cash flow statement requirement compared with the statement of sources and uses of funds, of which a copy was incorporated in the CML. This might be similar to the findings of Tai et al. (1990) who found that the lack of compliance may be a result of difficulties in interpreting the

disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements.

7.4.2 Testing the differences in the sub-indices ($H1_{sub1}$, $H1_{sub2}$, $H1_{sub3}$, $H1_{sub4}$, $H1_{sub6}$, $H1_{sub7}$, $H1_{sub8}$, $H1_{sub9}$) before and after

Table 7.8 shows the results of testing each sub-index before and after the changes in the economic policies and the new regulations.

Table 7. 8 Wilcoxon matched-pairs signed ranks test and Paired samples t test (note that sub-index 5 is excluded as explained earlier)

before / after	Wilcoxon matched-pairs signed ranks test					Paired samples t test		
	No of cases $R_b < R_a$	No of cases $R_b > R_a$	No of ties	Z	1-tail p	t	df	1-tail sig.
$H1_{sub1}$ Balance sheet items CA + CML + IASs	12 (7.50)	2 (7.50)	6	-2.3541	.009	2.16	19	.022
$H1_{sub2}$ Income statement items CA + CML + IASs	4 (5.88)	4 (3.13)	12	-.7702	.221	.75	19	.231
$H1_{sub3}$ General information items CA + CML + IASs	6 (7.33)	4 (2.75)	10	-1.6818	.046	2.11	19	.024
<i>$H1_{sub4}$</i> <i>Balance sheet items</i> <i>CML + IASs</i>	5 (5.50)	3 (2.83)	12	-1.3303	.091	1.62	19	.061
$H1_{sub6}$ Items in the notes CML + IASs	16 (11.94)	4 (4.75)	0	-3.2106	.001	3.96	19	.001
$H1_{sub7}$ Board of Directors report CA + CML*	1 (7.50)	8 (4.69)	8	-1.7770	.038	-1.00	16	.166
$H1_{sub8}$ St. of sources and application of funds CML only	7 (4.00)	0 (0.00)	13	-2.3664	.009	3.20	19	.002
$H1_{sub9}$ before Cash flow statement IASs only	5 (3.00)	0 (0.00)	15	-2.0226	.021	2.48	19	.011
(....) Mean rank of the group Boldface indicates that the item is significant at .05 <i>Italics indicate that the item is significant at .10</i>								

*Note that for 3 companies the reports of the board of directors were not available.

As shown in Table 7.8, both the Wilcoxon and t tests confirmed a statistically significant increase in the sub-indices 1, 3, 6, 8 and 9 at $p = .05$. Using the Wilcoxon matched-pairs test, the mean rank of each of these sub-indices in 1995 was significantly higher than the corresponding mean rank in 1991 (1-tailed $p = .009$, $.046$, $.000$, $.005$ and $.021$ respectively). Using the t test, the mean sub-indices 1, 3, 6, 8 and 9 in 1995 were significantly higher than the mean indices in 1991 (1-tailed sig. = $.022$, $.024$, $.000$, $.002$, $.011$ respectively). This supports rejecting the null form and accepting the alternative form of hypotheses $H1_{sub1}$, $H1_{sub3}$, $H1_{sub6}$, $H1_{sub8}$, and $H1_{sub9}$. This means that the levels of disclosure of the following sublists have significantly increased in 1995 compared with the corresponding level in 1991:

- Balance sheet items required by the CA + CML + IASs (sublist 1).
- General information items required by the CA + CML + IASs (sublist 3).
- Additional items required by the CML + IASs to be disclosed in the notes including accounting policies (sublist 6).
- Additional items to be disclosed in the statement of sources and applications of funds as required by the CML (sublist 8).
- Additional items to be disclosed in the cash flow statement as required by the IASs (sublist 9).

On the other hand, both the Wilcoxon and the t test confirmed that there is no significant increase in sub-indices 2 (income statement items required by the CA + CML + IASs) and 7 (additional items to be disclosed in the Board of Directors report as required by the CA + CML), an observation which was also noted from the descriptive statistics. This means that the null form of hypotheses $H1_{sub2}$, and $H1_{sub7}$ cannot be rejected. The level of disclosure in the following sublists has not increased significantly in 1995 compared with the corresponding level in 1991:

- Income statement items required by the CA + CML + IASs (sub-index 2).
- Additional items to be disclosed in the Board of Directors report as required by the CA + CML (sub-index 7).

For subindex 4 (additional balance sheet items required by the CML and the IASs), both the Wilcoxon and the t test indicate that there is an increase in this sub-index but not sufficient to make the difference significant at $p = .05$.

7.5 Identifying change in specific disclosure items

The disclosure items included in each sub-index were categorised as follows:

1. Items which were fully disclosed in both periods.
2. Items which were not applicable in either period, therefore were excluded from the comparison.
3. Items which were rarely disclosed in either period.
4. Items for which the level of disclosure increased / decreased slightly (less than 10%) in 1995 compared with 1991.
5. Items for which the level of disclosure increased greatly (10% or more) in 1995 compared with 1991.

Items in groups 1, 2 and 4 are summarised in appendices B, C and D respectively. Items in groups 3 and 5 are discussed in this section.

7.5.1 Items which were rarely disclosed in either period

There is a requirement of the CML to disclose the market values of land or of an investment if the market value is different from the book value. The market values were rarely disclosed by Egyptian listed companies. However these market values, which are very important in the context of the Egyptian economy, have been increasing. In 1993,

1994 and 1995 the market values of a large number of investments increased greatly (see table 7.9). Also, the price of land has been increasing for decades.

7.5.1.1 Market value of investments

The common practice of Egyptian listed companies is to disclose the cost or book value of all types of investment. This may be because the Companies Act, which was the main governing law from 1981 until the introduction of the CML, requires only the cost. Another probable reason is that, as explained in chapter 3, the Egyptian Stock Exchange was dormant for nearly 30 years and most of the listing was for tax exemption purposes. There was therefore no great difference between the book value and the market value during those years. Since 1992 the situation has changed dramatically. The stock prices of actively traded shares have doubled, trebled or increased even more in some cases (Table 7.9). The accounting practices of listed companies did not develop sufficiently quickly by 1995 to reflect the new situation.

An example of the differences between market values and book values of investments is provided in Table 7.9 which is a translation of an extract from the annual report of a listed public company included in the sample.

Table 7.9 Translation of an extract from the notes to the accounts of a listed public company, 1995

(Amounts are in thousands of Egyptian £s)

<i>Details of investment</i>	<i>Cost of investment</i>	<i>Market value of investment</i>	<i>Company notes</i>
Deposit in the National Bank of Investment	808	808	Invested through the National Bank of Investment
Deposit in the Central Bank of Egypt	2,454	2,454	Invested through the Ministry of Finance
Iron and Steel Co	21	38	Listed in the Stock Exchange
Suez Cement shares			Listed in the Stock Exchange
1 st issue	3,113	36,070	
2 nd issue	5,764	66,777	
3 rd issue	5,196	61,708	
4 th issue	4,919	6,582	
Arab Swiss Co	109	109	Last dealing was on 3/3/87
Foreign investment	-	-	not listed

The translation of an extract from the notes to the accounts of a listed company in 1995, presented in Table 7.9, shows the magnitude of differences between cost and market value of investments which have a listing in an emerging capital market with special features. There are companies listed mainly for tax purposes, like the Arab Swiss Co. which has had no share dealing for several years but, as at January 1997, remained listed, as checked by the researcher. There are other companies whose shares are traded and show a significant increase in the market price over cost, such as the Suez Cement Company. Actually in 1996, the CMA delisted around 100 companies for being rarely traded (LGT, 1997). However, more stringent action is still required.

7.5.1.2 Market value of land

Only one company from the 16 applicable companies disclosed the market value of land. For this company the book value of land was recorded as E£2.5 million, while the market

value was estimated as E£20 million. This case indicates the importance of disclosing the market value of land. This is because most of the sampled companies had been established for 10 years or more. That was a period during which there were significant changes in the market price of land in Egypt, especially in the 1980s when there was a high rate of inflation of more than 20% per annum in the 1980s, falling to 7.4% in 1996 (Merrill Lynch, 1996).

7.5.2 Items for which the level of disclosure increased greatly (more than 10%) in 1995 compared with 1991

In this section each item has a reference number (n / pp), where:

n = sub-index number and

pp = item number

Items for which the level of disclosure increased greatly (more than 10%) in 1995 compared with 1991 are:

- Gross and net cost of property plant and equipment (item 1/2)
- Accumulated depreciation (item 1/3)
- The par or legal value of shares (item 1/49)
- Breakdown of profit or loss by main activities (item 3/7)
- Additions or disposals of fixed assets (item 3/9)
- Cost formula used (item 6/2)
- Depreciation method (item 6/9)
- Useful life or depreciation rate (item 6/10)
- The accounting policy for revenue recognition (item 6/67)
- The accounting policy for foreign exchange (item 6/69)
- The accounting policy for borrowing costs (item 6/80)

- Security status of long term loans (item 6/83)
- Summary of interest rates and other loans details (item 6/84)

The increase in the indices of these items ranged from 10% to 56%. The increase in items 1/2, 1/3, 1/49, 3/7 and 3/9 can be explained by changes in economic policy and increased interest in external disclosure as a result of increased Stock Exchange activities, as they have been required by the CA since 1981. The increase in the remaining items can be explained by the new regulations becoming mandatory (CML and IASs). They were tested using Wilcoxon matched-pairs tests, as reported in table 7.10.

Table 7. 10 Wilcoxon matched-pairs signed ranks test

disclosure item	item indices		Wilcoxon matched-pairs signed ranks test				
	before %	after %	No of cases Rb<Ra	No of cases Rb>Ra	No of ties	Z	1-tailed p
item 1/2	90	100	4 (2.50)	0 (0.00)	16	-1.8257	.034
<i>item 1/3</i>	<i>90</i>	<i>100</i>	<i>3</i> (2.00)	<i>0</i> (0.00)	<i>17</i>	<i>-1.6036</i>	<i>.054</i>
item 1/49	80	100	5 (3.00)	0 (0.00)	15	-2.0226	.021
item 3/7	60	80	4 (2.50)	0 (0.00)	16	-1.8257	.034
<i>item 3/9</i>	<i>61</i>	<i>75</i>	<i>3</i> (3.00)	<i>1</i> (1.00)	<i>15</i>	<i>-1.4606</i>	<i>.072</i>
item 6/2	32	74	9 (5.09)	1 (6.50)	7	-2.1405	.016
item 6/9	63	95	7 (4.00)	0 (0.00)	13	-2.3664	.005
item 6/10	40	53	4 (2.50)	0 (0.00)	16	-1.8257	.034
item 6/67	0	32	6 (3.50)	0 (0.00)	13	-2.2014	.013
item 6/69	37	84	9 (5.00)	0 (0.00)	10	-2.6656	.004
item 6/80	13	69	7 (4.00)	0 (0.00)	6	-2.3664	.009
item 6/83	20	43	4 (2.50)	0 (0.00)	10	-1.8257	.034
<i>item 6/84</i>	<i>53</i>	<i>79</i>	<i>6</i> (3.83)	<i>1</i> (5.00)	<i>7</i>	<i>-1.5213</i>	<i>.064</i>
(...) Mean rank of the group Boldface indicates that the item is significant at .05 <i>Italics indicate that the item is significant at .10</i>							

As shown in Table 7.10 all items were significant at .05 except items 1/3, 3/9 and 6/84 which were significant at .10. This result means the level of disclosure of all tested items has increased significantly in 1995 compared with 1991.

There are three items in Table 7.10 (1/2, 1/3 and 1/49) which contribute to explaining the increase in sub-index 1 (balance sheet disclosure items required by the CA+CML+IASs). They show an improvement in information about fixed assets and share capital, despite the fact that the information was a requirement in 1991. There are two items in Table 7.10 (3/7 and 3/9) which contribute to explaining the increase in sub-index 3 (general information items required by the CA+CML+IASs). This shows further improvement in information on fixed assets and also a move towards segmental information. Finally there are 8 items in Table 7.10 which contribute to explaining the increase in sub-index 6 (general information, including accounting policies, required in the notes by the CML and the IASs). Five of the items are additional information which helps the reader understand the detail of the method used and three are information on accounting policy. Sub-index 6 (additional items, required to be disclosed by the CML and the IASs in the notes including accounting policies, by the CML and the IASs) showed the most significant increase between 1991 and 1995.

7.6 Testing the difference in the timeliness of the annual reports

This section reports on testing the difference in the timeliness of the 1991 and 1995 annual reports of the sampled companies. As explained in chapter 6, the timeliness was measured in months between the end of the financial year and the date of the audit report.

Table 7. 11 Descriptive statistics of timeliness of the 1991 and 1995 annual reports

	time in months	
	1991	1995
Mean	4.73	3.83
std.	.92	1.14
Mini	2.66	1.50
Maxi	6.73	5.70
Median	4.78	3.76

The financial year-end of companies surveyed was 31 December for private sector companies and 30 June for public sector companies. Only two of the surveyed companies were exceptions with a year-end on 31 March for one company and on 30 November for the other. Those two companies are branches of international companies operating in Egypt and it is likely that their year-end is related to that of their parent company.

The date of the financial year-end did not change, for the sampled companies, in 1995 compared with 1991. On the other hand, the average time between the end of the financial year and the auditors' reports shortened from 4.7 months in the period before to 3.8 months in the period after the CML was issued. There was an exception of one company having a period of 8.9 months between the end of the financial year and the audit report. This company had considerable losses which probably affected the audit process. It was therefore excluded from the calculation of the average. On the other hand, the best company was one of the actively traded companies which produced its audit report in 1.5 months. All companies except the company mentioned met the 6-months requirements of the Companies Act.

Table 7.12 indicates on all measures that the sampled companies produced their annual reports faster in 1995 than in 1991.

Although the decline observed in the reporting period is only .9 month on average, it can be suggested that the new economic policy changes and increasing interest towards external disclosure and increased stock exchange activities probably had some effect on the reporting behaviour of Egyptian listed companies.

Table 7. 12 Wilcoxon matched-pairs signed ranks test and paired samples *t* test

before / after	Wilcoxon matched-pairs signed ranks test					Paired samples <i>t</i> test		
	No of cases Rb<Ra	No of cases Rb>Ra	No of ties	Z	1-tail p	<i>t</i>	df	1-tail sig.
timeliness	2 (4.50)	13 (8.54)	1	-2.8966	.002	-3.86	15	.001

As shown in Table 7.12 both Wilcoxon and *t* tests were significant at $p = .05$. This supports the descriptive statistics and the conclusion that reporting time in 1995 is statistically shorter compared with 1991.

7.7 Summary and conclusion

This section contains a summary of the results and findings and their theoretical implications.

7.7.1 Summary of findings

The analysis of the annual reports of a matched pairs sample of Egyptian listed companies in 1991 and 1995 revealed a significant increase in the three total indices (CA, CML and IASs), the four partial indices (pCML, pIASs, pCML_A and pIASs_{NA}) and most of the nine sub-indices. From the results of the statistical tests it can be concluded that the level of

disclosure in the annual reports of Egyptian listed companies increased significantly in 1995 compared with 1991.

The increase in the CA index and the sub-indices 1 and 3 may be explained as a response from companies to the new economic policy of privatisation and increased interest in external disclosure as a reaction to the increased activities in the Stock Exchange. However, the increases in the CML and IASs indices and their sub-indices 6, 8 and 9 may be seen as a reaction to the new capital market regulations issued in 1993.

The levels of disclosure of the following sublists increased significantly in 1995 when compared with the corresponding level in 1991:

- Balance sheet items required by the CA + CML + IASs (sublist 1).
- General information items required by the CA + CML + IASs (sublist 3).
- Additional items to be disclosed in the notes including accounting policies required by the CML + IASs (sublist 6).
- Additional items to be disclosed in the statement of sources and application of funds as required by the CML (sublist 8).
- Additional items to be disclosed in the cash flow statement as required by the IASs (sublist 9).

On the other hand, there was no significant increase in the income statement items required by the CA + CML + IASs (sub-index 2). This is to be expected because the sub-index was already high in 1991. It is likely that companies in 1991 paid more attention to the income statement than to the balance sheet because the net profit and dividends were the primary target of attention (Elsadik, 1990).

There was also no significant increase in the additional items to be disclosed in the Board of Directors report as required by the CA + CML (sub-index 7). However, the worst

companies improved their board of directors' report greatly in 1995 (average increase 17%). The absence of significant change may be the result of having only 4 items in sublist 7 and one of these items is the market value of land which, as explained in section 7.5.1.2, was rarely disclosed. Also, the results relating to sub-index 7 may have been affected by the missing data for 3 directors' reports.

The change in sub-index 4 (additional balance sheet items required by the CML and the IASs) was not significant in both Wilcoxon and t tests at .05 but significant at .10. The absence of significant change may be the result of having a short list in sub-index 4, which includes the market value of investments. This information item was rarely disclosed in both periods, as explained in section 7.5.1.1. The extract from an annual report relating to the market value of investments (section 7.5.1.1.) indicated the problems of having a listing for rarely traded companies. It is concluded that the CMA ought to be faster and more stringent in de-listing this type of company, which will enable the CMA to be more effective in filing and providing the required data on listed companies to investors.

Disclosure items which had increased by 10% or more were used to explain the significant changes in the indices and sub-indices. These items showed that disclosure related to the CA had improved most significantly in matters of fixed assets, while the significant increase in sub-index 6 was explained by the improvement in notes to the accounts and accounting policy disclosures required by the CML and IASs.

Finally, the difference in the timeliness of the 1991 and 1995 annual reports of the sampled companies was tested using both Wilcoxon matched pairs test and t test. Although the decline observed in the reporting period is only 0.9 month on average, it can be suggested that the new economic policy changes and increasing interest shown towards external disclosure as a reaction to increased Stock Exchange activities probably

had some effect on the reporting behaviour of Egyptian listed companies. Both tests were significant at .05, showing that reporting time in 1995 was significantly shorter compared with 1991.

The analysis revealed a better level of compliance with mandatory requirements by Egyptian listed companies (CML, 84% and IASs, 85% 1995) compared with companies in other developing countries as shown in previous studies, e.g. Tanzania (53%). In Hong Kong (Tai et al., 1990) the average compliance rate was 78% for mandatory items in the 1986/7 annual reports. In Bangladesh for 4 companies only, mandatory disclosure indices were more than 90%, but for 37 companies the average index was between 60% and 80%.

A higher level of compliance with CA (95% in 1995) requirements than with the CML (84% in 1995) and IASs (85% in 1995) was observed. This matter will be investigated further in chapter 9. The increase in disclosure as a reaction to new regulations adds information about Egypt to what has been shown in other developing countries studies; Jordan (Khasharmeh, 1995), Bangladesh, (Nicholls and Ahmed, 1995) and Saudi Arabia, (El-Modahki, 1995).

7.7.2 Theoretical implications

The analysis of matched pairs of annual reports of 1991 and 1995 has shown a significant increase in the indices of both established and new regulations.

The increase in disclosure of the requirements of established regulations implies some applications of agency and capital needs theories. This increase can be considered a reaction to the change in the economic policies. As explained earlier, the start of the privatisation programme in Egypt implies an increase in the ownership base. Companies increased their disclosure in order to reduce agency costs and to be able to collect capital at a reduced cost.

The increase in disclosure of the requirements of the new regulations supports the theory which justifies regulation in emerging capital markets (see section 2.2.4). It also supports the theory which argues that accounting regulation is one of the important factors causing improvement in disclosure.

The relatively small number of companies in the sample did not allow further investigation of the relationship between disclosure levels and companies characteristics. Further analysis is reported in chapters 8 and 9 to evaluate the level of disclosure in 72 annual reports for 1995. Those reports include the 1995 annual reports of the 20 companies analysed in this chapter and another 52 companies in respect of which no corresponding report has been obtained for 1991. The analysis in chapters 8 and 9 includes assessing the level of disclosure and explore any links between the disclosure indices and company characteristics.

CHAPTER 8

8. DISCLOSURE INDICES OF EGYPTIAN LISTED COMPANIES

1995: RELATIVE INDICES AND RELATIONSHIP TO COMPANY

CHARACTERISTICS (UNIVARIATE ANALYSIS)

8.1 Introduction

The purpose of the chapter is to test hypothesis H_2 and to test hypothesis H_3 by univariate analysis (see chapter 6), using the annual reports of 72 Egyptian listed companies for the year ending either December 1995 or June 1996 (described in this chapter as '1995'), selected as explained in Chapter 6. The indices were calculated on the basis defined in chapter 6. Descriptive statistics of the disclosure indices are presented in section 8.2. In section 8.3 testing of hypothesis H_2 is reported using the Wilcoxon matched-pairs signed ranks test. Section 8.4 summarises the descriptive statistics of the company characteristics (independent variables). Testing hypothesis H_3 is reported using univariate analysis (correlation and the Wilcoxon-Mann-Whitney test) in section 8.5. Testing hypothesis H_3 by multivariate regression analysis is reported in chapter 9. The chapter concludes with a summary of the results and a discussion of the main points of interest in the findings.

8.2 Descriptive statistics of the disclosure indices

From the theoretical discussion of chapter 2, the following expectations was formed.

The level of compliance is less than 100% as non-compliance costs are not very high compared to compliance costs (2a).

The level of disclosure in most developing countries is low and has failed to fulfil the information needs of users (e.g. Wallace, 1987 Abayo et al., 1993).

From the findings of previous research and the expectations based on theory, the following question was generated:

2(a) What is the level of compliance of Egyptian listed companies with the disclosure requirements of different laws and regulations (CA, CML, IASs)?

This section presents descriptive statistics of the total indices, partial indices and sub-indices.

8.2.1 The three total indices (CA, CML and IASs)

This section presents summary descriptive statistics of the three total indices (CA, CML and IASs) (table 8.1) and reports stem-and-leaf analysis of each index (see Appendix 8.1 to this chapter, Figures A8.1 to A8.3). The total indices represent in summary the disclosure levels found in the annual reports of 72 Egyptian listed companies, calculated and analysed according to the methods described in Chapter 6. The partial indices, the component sub-indices and the categories of disclosure items, as well as disclosure items of particular interest, are discussed in detail in sections 8.2.2, 8.2.3 and 8.2.4.

Table 8. 1 Total indices for 72 listed Egyptian companies

	CA indices	CML indices	IASs indices
Mean	.9274	.7938	.8271
Standard deviation	.0606	.1135	.0917
Minimum	.6842	.5250	.5688
Maximum	1.0000	.9831	.9833
Median	.9487	.7708	.8192

Table 8.1 shows that the CA indices have the highest mean and the lowest standard deviation. The means of the CML indices and the IASs indices are closer to each other

than to the mean of the CA indices. Table 8.1 indicates a range of CA disclosure indices from .68 to 1.00. However, for both the CML indices and the IASs indices there is a wider range.

These indices and their ranges suggest that the companies have complied more with the disclosure requirements of the CA than with the disclosure requirements of the CML and the IASs and also that compliance is more variable for the CML and the IASs. This is expected as explained in chapter 6, section 6.2. This means that the descriptive statistics support the alternative approach of hypotheses $H2_{CA, CML}$ and $H2_{CA, IASs}$. This intuitive observation is tested statistically in section 8.3.1.

It was explained in chapters 5 and 6 that the new CML has three different types of disclosure items:

- Disclosure items previously and still required by the CA.
- Disclosure items, in addition to CA items, which are appended to the CML in Arabic (partial CML Arabic).
- Disclosure items, in addition to the CA and partial CML Arabic items, which are in the IASs and not appended to the CML, for which no official Arabic translation was available³ (partial IASs, not Arabic).

Therefore it was important to explore both partial CML Arabic ($pCML_A$) and partial IASs not Arabic ($pIASs_{NA}$).

³ Note that this was the situation as at the end of 1996.

8.2.2 The partial indices ($pCML_A$ and $pIASs_{NA}$)

Table 8. 2 Partial indices for 72 listed Egyptian companies

	$pCML_A$	$pIASs_{NA}$
Mean	.5633	.3557
Standard deviation	.2452	.4303
Minimum	.1818	.0000
Maximum	1.0000	1.0000
Median	.5096	.0000

Table 8.2 shows that both $pCML_A$ indices and $pIASs_{NA}$ indices are lower than the CA indices of Table 8.1 (mean .56, .36 and .93 respectively). Also the table shows that $pIASs_{NA}$ indices are lower than $pCML_A$ indices (mean .36 and .56 respectively). The range of $pIAS_{NA}$ (.00 to 1.00) is wider than the range of $pCML_A$ (.18 to 1.00). The minimum index of the $pIAS_{NA}$ is much lower than the minimum index of the $pCML_A$. The descriptive statistics support the alternative approach of hypothesis $H2_{pCML_A \& pIASs_{NA}}$. This intuitive observation is tested statistically in section 8.3.2.

8.2.3 The sub-indices (sub-indices 1 to 9)

Table 8. 3 Sub-indices for 72 listed Egyptian companies

sub-index	1	2	3	4	6	7	8	9
Mean	.9570	.9307	.8986	.7859	.7065	.6415	.3889	.3486
Standard deviation	.0637	.1036	.1076	.2744	.1930	.1889	.4909	.4493
Minimum	.6667	.6667	.6667	.0000	.2222	.0000	.0000	.0000
Maximum	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Median	.9643	1.0000	.8750	1.0000	.7261	.6667	.0000	.0000

Table 8.3 shows that the mean score of the sub-indices 1, 2 and 3 (which relate to disclosure items required by the CA, the CML and the IASs) is higher than all other sub-indices (which are required by either the CML or the IASs or both except subindex 7). The explanation is that the CA has been required since 1981 while both the CML and the

IASs have been required only since 1993, allowing a transition period up to 1995. The analysed reports for 1995 are the first reports available after the transition period ended.

8.2.4 Categories of disclosure items and items of particular interest

The disclosure items within each sub-index were categorised into four groups:

- items which were fully disclosed (index 100%)
- items which were almost fully disclosed (index 97% - 99%)
- items which were partially disclosed (index 40% - 96%)
- items rarely or never disclosed (index less than 40%)

The full list for each of the first three groups is shown in Appendix E. The main items which are rarely or never disclosed have been discussed in chapter 7. The number of items in each category of applicable items is shown in Table 8.4, together with the number of items found to be not applicable.

Table 8. 4 Categories of disclosure items by relative magnitude of index

Items	sub-index 1		sub-index 2		sub-index 3		sub-index 4		sub-index 5	
	No	%	No	%	No	%	No	%	No	%
Fully disclosed (index 100%)	22	56	8	62	5	63	2	29	1	25
Almost fully disclosed (97% to 99%)	7	18	3	23	1	12	0	0	0	0
Partially disclosed (40% to 96%)	10	26	2	15	2	25	3	42	2	50
Rarely or never disclosed (< 40%)	0	0	0	0	0	0	2	29	1	25
Total applicable	39	100	13	100	8	100	7	100	4	100
Found to be not applicable	14		0		2		13		1	
Total in checklist	53		13		10		20		5	

Items	sub-index 6		sub-index 7		sub-index 8		sub-index 9	
	No	%	No	%	No	%	No	%
Fully disclosed (index 100%)	18	44	2	50	0		0	
Almost fully disclosed (97% to 99%)	2	4	1	25	0		0	
Partially disclosed (40% to 96%)	13	32	0	0	16	100	12	100
Rarely or never disclosed (< 40%)	8	20	1	25	0		0	
Total applicable	41	100	4	100	16	100	12	100
Found to be not applicable	64		0		0		3	
Total in checklist	105		4		16		15	

Note: The figures for 'total in the checklist' match the figures given in chapter 6, section 6.3.4.

The principal interest of Table 8.4 for policy-making lies in the items rarely or never disclosed. These are the market value of land (one item in sub-index 7) and the market value of investments (two items in sub-index 4). These have already been identified and discussed in section 7.5.1 of chapter 7. Another eight items in sub-index 6 were found to be rarely or never disclosed. For those items it is expected that many companies will not be aware that they are to be disclosed because they are within the additional items which are required by the IASs and are not appended to the CML in Arabic. This important result confirms the urgent need for an official Arabic translation and technical support to be widely available to listed companies. This matter will be discussed in the policy recommendations of chapter 10.

Another interesting aspect of Table 8.4 is the number of items found to be not applicable (see Appendix C for details). This could not have been predicted when the disclosure lists were prepared but the distribution of items in Table 8.4 provides useful insight into the relative importance of disclosure items for purposes of short-term planning of training courses for the use of IASs in Egypt.

8.2.5 Normality of distribution of the indices

In order to carry out statistical testing it is necessary to screen these indices (dependent variables) for normality. The test used for normality is the Kolmogorov-Smirnov (Lilliefors) test (Norusis, 1993). Using this test, the hypothesis of normality of the distributions of CA indices, CML indices, pCML_A indices, pIAS_{NA} indices and all sub-indices can be rejected but the hypothesis of normality of the distribution of the IASs indices cannot be rejected.

Therefore it was decided to use non-parametric tests in testing hypotheses H2 (Wilcoxon Matched-Pairs test) and H3 (Spearman rank correlation and Wilcoxon-Mann-Whitney

test) for the univariate analysis. It was also decided that transformations into ranks and normal scores were preferable for the multivariate analysis (see chapter 9).

8.3 Testing Hypothesis H2

Hypothesis H2 contains two sub-hypotheses as follows:

8.3.1 Hypothesis H2_{CA, CML} and H2_{CA, IASs} (effect of familiarity on disclosure)

From the theoretical discussion of chapter 2 the following expectations was formed.

Familiarity with the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the established regulations will be higher than that of other parts (2b).

The expectation for 2(b) based on developments in regulation (chapter 3 and 4) and previous research (Nicholls and Ahmed, 1995), is that compliance with the established laws and regulations will be higher than with the new regulations. Lack of compliance may be the result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure (Tai et al., 1990).

From the findings of previous research and the expectations based on theory, the following question was generated:

2(b) Do Egyptian listed companies differ in their level of compliance with the established laws (CA) as compared with the new regulations (CML which includes a statement which mandates the IASs)?

The question was transformed into the following hypothesis in chapter 5:

$H2_{CA, CML}$ and $H2_{CA, IASs}$: The level of compliance with the disclosure requirements of the CA does not differ significantly from the level of compliance with each of the CML and the IASs. The alternative hypothesis is that the level of compliance with the CA is higher than the level of compliance with each of the CML and the IASs.

In order to test whether the CA indices are greater than both the CML indices and the IASs indices, a Wilcoxon matched-pairs signed ranks test was run. The results are reported in Table 8. 5.

Table 8. 5 Wilcoxon Matched Pairs Signed Ranks test

(a) The CA and CML indices

indices compared	No of cases $R_{CA} > R_{CML}$ and their mean rank	No of cases $R_{CA} < R_{CML}$ and their mean rank	No of Ties	Z	1-tailed p
CA index with CML index	70 cases (36.46)	1 case (4.00)	1 case	-7.2998	.0000

(b) The CA and IASs indices

indices compared	No of cases $R_{CA} > R_{IASs}$ and their mean rank	No of cases $R_{CA} < R_{IASs}$ and their mean rank	No of Ties	Z	1-tailed p
CA index with IASs index	69 cases (37.81)	3 cases (6.33)	0 cases	-7.2671	.0000

Note: R_{CA} = Ranks of CA indices; R_{CML} = Ranks of CML indices

The results of the test allow rejection of the null hypothesis and acceptance of the alternative that the CA indices are significantly higher than each of the CML indices and the IASs indices. It has been already been indicated in chapter 4 that this is to be expected as the CA disclosure requirements are seen to be less comprehensive compared with the CML and the IASs. Furthermore, as explained in chapter 4, the CA has been

mandatory in Egypt since 1981, but the CML and the IASs were issued in 1993 and only became fully mandatory in 1995. Therefore, it is to be expected that there was more familiarity and compliance with the requirements of the CA than with those of the CML and the IASs for the companies included in this exercise. The testing of the difference in $pCML_A$ and $pIASs_{NA}$ is reported in section 8.3.2.

8.3.2 Hypothesis $H2_{pCML_A \& pIASs_{NA}}$ (effect of language on disclosure practices)

From the theoretical discussion of chapter 2 the following expectations was formed.

Language of the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the national regulations in Arabic will be higher than that of other parts (2c).

The expectation for 2(c), based on the knowledge that accounting is taught in Egypt mainly in Arabic with minor exceptions (see chapter 3) and that there is a lack of an official Arabic translation (see chapter 4), is that compliance with the additional disclosure requirements appended to the CML in Arabic ($pCML_A$) will be higher than the IASs additional disclosure requirements not appended to the CML. The latter are the additional requirements of the IASs which have to be followed by companies according to Statement 58 of the CML. They are denoted $pIASs_{NA}$ in this research.

From the findings of previous research and the expectations based on theory, the following question was generated:

2(c) Do Egyptian listed companies differ in their level of compliance with the additional disclosure requirements of the new regulations according to the language of the requirements?

The question was transformed into the following hypothesis in chapter 5:

$H2_{pCMLA \& pIASsNA}$: The level of compliance with the disclosure requirements of the partial CML Arabic ($pCML_A$) does not differ significantly from the level of compliance with the disclosure requirements of the partial IASs not Arabic ($pIASs_{NA}$). The alternative hypothesis is that the level of compliance with the $pCML_A$ is higher than the level of compliance with the $pIASs_{NA}$.

In order to test whether the $pCML_A$ indices are greater than the $pIASs_{NA}$, a Wilcoxon matched-pairs signed ranks test was run. The results are reported in Table 8. 6.

Table 8. 6 Wilcoxon Matched-Pairs Signed Ranks test of the partial indices

indices compared	No of cases $R_{pCMLA} > R_{pIASsNA}$ and their mean rank	No of cases $R_{pCMLA} < R_{pIASsNA}$ and their mean rank	No of Ties	Z	1-tailed p
$pCML_A$ index with $pIASs_{NA}$ index	45 cases (42.71)	26 case (24.38)	1 case	-3.6900	.0002

As shown in table 8.6, the results of the test allow rejection of the null hypothesis and acceptance of the alternative that the $pCML_A$ indices are significantly higher than the $pIASs_{NA}$ indices. This was expected as a result of the language barrier explained in section 4.8 of chapter 4. The language barrier is a complex matter because there is more than one problem. There was, at the time of this research, no official Arabic translation. There may have been private translations in existence but there was no ready access to or publicity for such translations. Even if they were available there would be a problem of knowing how reliable they were. Companies were unlikely to be able to find technical support in understanding the English language versions of IASs, unless they had ‘big six’

auditors. Understanding the technical language may be difficult even for a person who has a good command of English in general use.

8.4 Descriptive statistics of the company characteristics (Independent variables)

Before testing hypothesis H3 company characteristics were screened. Their descriptive statistics are reported this section. As mentioned in chapter 6, the tested company characteristics include five continuous variables and four categorical (dummy) dichotomous variables.

8.4.1 The continuous independent variables

Gearing, profit ratio, liquidity, assets and sales are chosen to be tested in this study, as explained in detail in chapters 5 and 6. Their descriptive statistics are summarised in Table 8.7.

Table 8.7 Descriptive statistics of the five continuous independent variables (company characteristics)

	gearing	profit ratio	liquidity	assets	sales
				E£m	E£m
Mean	.259	.472	1.095	331.282	159.970
Standard deviation	1.736	.850	1.455	614.747	327.999
Minimum	-11.910	-1.280	.010	.900	.010
Maximum	5.820	4.960	8.330	3131.100	2206.500
Kolmogrov-Smirnov (Lilliefors-Significance)	.000	.000	.000	.000	.000
Normality can be rejected	yes	yes	yes	yes	yes

The small observed significance of the K-S (Lilliefors) test means that the hypothesis of normality of the distributions of the five continuous variables can be rejected.

8.4.2 The categorical independent variables

Share trading (traded versus rarely traded), legal form (public sector versus private sector), type of business activity (industrial versus not industrial) and type of audit firm ('big six' versus others) were chosen to be tested in this study as explained in detail in chapters 5 and 6. The number of companies in each category is summarised in Table 8. 8.

**Table 8. 8 Descriptive statistics of the four categorical independent variables
(company characteristics)**

	Share trading	Legal form	Type of activity	Audit firm
Category 1	29 frequently traded	25 public,	53 industrial	15 big six
Category 0	43 rarely or not traded	47 private	19 non-industrial	57 others

Testing hypothesis H3 was performed through univariate (section 8.5) and multivariate analysis (chapter 9). The next section contains reports on the univariate tests.

8.5 Testing H₃ by univariate analysis

In most of the previous studies (chapter 2), disclosure was found to be related to one or more company characteristics (e.g. Tai et al., 1990; Hossain et al., 1994, El-Modahki, 1995). From the analysis of theoretical implications of previous studies, the following expectations were formed:

- *The level of disclosure in the annual reports of Egyptian listed companies is positively related to a company's size (total sales and total assets).*
- *There is a significant positive association between the level of disclosure of Egyptian listed companies and share trading. Actively traded companies will disclose more than rarely traded companies.*

- *There is a significant positive association between the level of disclosure of Egyptian listed companies and legal form. Pubic sector companies will disclose more than private sector companies.*
- *There is a significant positive association between the IASs disclosure of Egyptian listed companies and the type of audit firm. Companies audited by one of the 'big-six' will disclose more in terms of IASs requirements than companies audited by other audit firms.*
- *There is a significant association between the levels of disclosure other than the IASs, of Egyptian listed companies and audit firm.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and gearing.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and liquidity.*
- *There is a significant association between the level of disclosure of Egyptian listed companies and profit ratio*
- *There is a significant association between the level of disclosure of Egyptian listed companies and type of business activity.*

From these expectations the following question was generated:

Empirical research question 3 (from chapter 2)

Is there a significant association between any of the disclosure indices of a company and its characteristics?

This question was transformed into hypothesis H3:

H3: There is no significant association between company characteristics and the disclosure indices. The alternative hypothesis is that there is a relationship between the disclosure compliance (indices) and company characteristics.

In the univariate analysis, the effect of individual company characteristics on disclosure indices was examined one at a time.

8.5.1 Univariate analysis between each of the disclosure indices and the continuous independent variables

To examine the correlation between each of the indices and continuous independent variables⁴ (gearing, liquidity, profit ratio, assets and sales), the Spearman rank correlation was run. Coefficients of correlation and their significance are reported in Table 8.9.

⁴ A detailed explanation of these variables, reasons for selection and method of computation was presented in chapter 6.

Table 8. 9 Spearman rank correlation between indices and continuous independent variables

	CA	CML	IASs	pCML _A	pIAS _{SNA}	Sub 1	Sub 2	Sub 3	Sub 4	Sub 6	Sub 7	Sub 8	Sub 9
Gearing	.1812 (.128)	.2974 (.011)	-.0037 (.976)	.2575 (.029)	.0100 (.934)	.2373 (.045)	.1639 (.169)	.1699 (.154)	-.1468 (.218)	-.2256 (.057)	-.1364 (.330)	.4370 (.000)	.0065 (.957)
Liquidity	-.2035 (.086)	-.1660 (.163)	-.2222 (.061)	-.1342 (.261)	-.1171 (.327)	-.2098 (.077)	-.1015 (.396)	.2032 (.087)	-.0776 (.517)	-.0683 (.568)	.2698 (.051)	-.0754 (.529)	-.0949 (.428)
Profit ratio	.2961 (.012)	.3847 (.001)	.2864 (.015)	.3509 (.003)	.1980 (.095)	.3102 (.008)	.1949 (.101)	.2392 (.043)	-.0712 (.552)	.1182 (.323)	.0994 (.479)	.3098 (.008)	.1277 (.285)
Assets	.5606 (.000)	.6311 (.000)	.4404 (.000)	.5525 (.000)	.2716 (.021)	.5166 (.000)	.4429 (.000)	.4058 (.000)	-.1209 (.312)	.0634 (.597)	.0342 (.808)	.5374 (.000)	.2846 (.015)
Sales	.5581 (.000)	.6435 (.000)	.4188 (.000)	.5588 (.000)	.2245 (.058)	.5879 (.000)	.3783 (.001)	.4159 (.000)	-.0505 (.673)	.0470 (.695)	.0229 (.871)	.5559 (.000)	.2049 (.084)

In each cell:

- The upper figure is the correlation coefficient (r).
- The lower figure is the significance of the correlation coefficient.
- Bold typeface shows correlation coefficients which are significant at $p = .05$.

Table 8.9 shows the following:

- Assets have a positive significant correlation with the CA, CML, IASs, $pCML_A$, $pIASs_{NA}$, sub-index 1, sub-index 2, sub-index 3, sub-index 8 and sub-index 9 at $p = .05$.
- Sales have a positive significant correlation with the CA, CML, IASs, $pCML_A$, sub-index 1, sub-index 2, sub-index 3, sub-index 8 at $p = .05$ and with both $pIASs_{NA}$ and Sub-index 9 at $p = .10$.
- Profit ratio is positively correlated with CA, CML, IASs, $pCML_A$, sub-index 1, sub-index 3, and sub-index 8.
- Gearing is positively correlated with CML, $pCML_A$, sub-index 1 and sub-index 8.

However, the correlation between the indices and each of the profit ratio and gearing are generally weaker than the correlation between the indices and each of the size measures (assets and sales). From this univariate analysis it seems that size is the most important company characteristic of the continuous variables in explaining the indices. This is investigated further using multivariate analysis in chapter 9.

8.5.2 Univariate analysis between each of the disclosure indices and the categorical independent variables

The Wilcoxon-Mann-Whitney test was performed to assess whether each of the four dichotomous categorical variables (legal form, activity in the Stock Exchange, audit firm, type of activity) had an impact on the disclosure indices.

8.5.2.1 Legal form

It was mentioned in chapter 3 that public sector companies at the time of this study were listed in the Stock Exchange as a preliminary stage to privatisation or had been partially privatised and were at the stage of preparing to issue more shares in the near future.

Therefore, a higher level of disclosure is expected in order to raise public confidence and interest in their shares according to signalling theory and agency theory (see chapter 5). It has been shown in chapter 3 that public confidence in public sector listed companies has been very high and that shares offered in the Stock Exchange were three or four times oversubscribed. Table 8. 10 shows that public sector companies have scored significantly higher than private sector companies in the total indices, partial indices and all sub-indices except sub-indices 4, 6 and 7. This result is as expected because public sector companies in Egypt are listed either with the intention of issuing shares in the near future or with part of the share capital already issued and the intention of issuing more in the near future. Previous literature has suggested that companies may disclose more in the years immediately before they issue new securities (Lang and Lundholm, 1993). The findings will be investigated further using multivariate analysis in chapter 9. The results for sub-indices 4, 6 and 7 do not differ significantly for the two types of legal form. This may be because the items within sub-indices 4 and 6 were relatively new and both groups reacted similarly. For sub-index 7 there is the problem of not having the directors' reports for all the companies, so that the result cannot easily be interpreted.

Table 8. 10 The Wilcoxon - Mann-Whitney test between public sector and private sector companies for each of the disclosure indices

disclosure index	public companies mean rank (25 cases)	private companies mean rank (47 cases)	1 tailed p
CA index Companies Act	53.30	27.56	.0000
CML index Capital Market Law	53.24	27.60	.0000
IASs index International accounting standards	47.44	30.68	.0004
pCML_A index Partial CML Arabic	40.44	29.09	.0000
pIAS_{SNA} index partial IASs not Arabic	41.86	33.65	.0420
sub-index 1 Balance sheet items CA + CML + IASs	47.78	30.50	.0002
sub-index 2 Income statement items CA + CML + IASs	48.20	30.28	.0000
sub-index 3 General information items CA + CML + IASs	50.80	28.89	.0000
sub-index 4 Balance sheet items CML + IASs	35.10	37.24	.3251
sub-index 6 Items in the notes including accounting policies CML + IASs	36.56	36.47	.4929
sub-index 7 Board of directors report items CA + CML	26.86	27.13	.4738
sub-index 8 Statement of sources and application of funds items CML only	49.86	29.39	.0000
sub-index 9 Cash flow statement items IASs only	42.00	33.57	.0309

8.5.2.2 Share trading of companies in the Stock Exchange

It was explained in chapters 3 and 6 that the Egyptian stock exchange has around 700 listed companies. Of these around 100 are traded. Other companies are rarely or never

traded companies which were listed under the provisions of the previous CML⁵ or listed for tax exemption⁶ offered by tax law for listed companies. This resulted in a large number of companies being listed only for tax purposes. Traded companies are those companies which are listed in the Stock Exchange to raise capital, therefore public disclosure is an important matter. It is expected that these traded companies will disclose more than the rarely traded companies. Table 8. 11 shows the results of the Wilcoxon-Mann-Whitney test of the indices of traded versus rarely traded. The table shows that actively traded companies have scored higher than rarely traded companies in the CA, CML, IASs, pCML, and all sub-indices except 6 and 9. For these two sub-indices the groups of companies are similar. This result is as expected because actively traded companies want to attract investors and raise new capital. Previous research has shown that such companies disclose more according to the capital needs theory (see chapter 5). The results for sub-indices 6 and 9 may be similar because the regulations are relatively new and both types of companies have reacted similarly. These findings will be investigated further using multivariate analysis in chapter 9.

⁵ The previous capital market regulations obliged all shareholder companies to be listed if the company proved to be profitable; this obligation is omitted from the CML of 1992.

⁶ This exemption was introduced in the early 1970s to encourage listing after a dramatic crash in the number of listed companies in the 1960s (after nationalisation)

Table 8. 11 Wilcoxon-Mann-Whitney test of the indices of actively traded versus not-actively traded

Disclosure index	Traded mean rank (29 cases)	Rarely traded mean rank (43 cases)	1-tailed p
CA index Companies Act	48.29	28.55	.0000
CML index Capital Market Law	51.59	26.33	.0000
IASs index International accounting standards	45.07	30.05	.0005
pCML_A index Partial CML Arabic	50.76	26.88	.0000
pIASs_{NA} index partial IASs not Arabic	37.57	35.78	.3493
sub-index 1 Balance sheet items CA + CML + IASs	44.76	30.93	.0020
sub-index 2 Income statement items CA + CML + IASs	44.31	31.23	.0015
sub-index 3 General information items CA + CML + IASs	45.34	30.53	.0008
sub-index 4 Balance sheet items CML + IASs	41.26	33.29	.0413
sub-index 6 Items in the notes including accounting policies CML + IASs	41.05	33.43	.1246
sub-index 7 Board of directors report items CA + CML	31.33	22.50	.0141
sub-index 8 Statement of sources and application of funds items CML only	46.09	30.03	.0001
sub-index 9 Cash flow statement items IASs only	37.45	35.86	.3534

8.5.2.3 Audit firm type

In the previous literature, it was suggested that international audit firms persuade their clients to comply more closely with disclosure requirements (Wallace and Naser, 1995). It is expected that Egyptian companies which are audited by one of the international firms will be more compliant with the IASs requirements. In particular it is expected that these companies will score higher in the IASs, pIASs_{NA} indices and sub-indices 6 and 9. Therefore a one tailed test was performed for these particular indices. For the other indices and sub-indices there is no clear expectation and so a two tailed test was performed.

Table 8. 12 reports the results of Wilcoxon - Mann-Whitney test between the indices and audit firm type.

Table 8. 12 Wilcoxon-Mann-Whitney test of the indices of companies audited by one of the ‘big six’ and companies audited by other firms

disclosure index	‘big six’ mean rank (15 cases)	Others mean rank (57 cases)	2 tailed p
CA index Companies Act	32.03	37.68	.3527
CML index Capital Market Law	29.39	38.23	.1720
IASs index International accounting standards	47.90	33.53	.0188 (1 tailed p)
pCML _A index Partial CML Arabic	31.97	37.69	.3457
pIASs_{NA} index partial IASs not Arabic	51.90	32.45	.0002 (1 tailed p)
sub-index 1 Balance sheet items CA + CML + IASs	35.80	36.68	.8788
sub-index 2 Income statement items CA + CML + IASs	37.43	36.25	.8251
sub-index 3 General information items CA + CML + IASs	23.53	39.91	.0039
sub-index 4 Balance sheet items CML + IASs	40.37	35.48	.3783
sub-index 6 Items in the notes including accounting policies CML + IASs	48.23	33.41	.0023 (1 tailed p)
sub-index 7 Board of directors report items CA + CML	38.07	25.32	.0319
sub-index 8 Statement of resources and application of funds items CML only	24.90	39.55	.0043
sub-index 9 Cash flow statement items IASs only	51.67	32.51	.0001(1 tailed p)

Table 8. 12 shows that companies audited by a ‘big six’ audit firm scored higher in the four indices related to IASs (IASs, pIASs_{NA}, sub-index 6 and sub-index 9) as was expected for the IASs requirements. In addition, companies audited by a ‘big six’ firm

were ranked significantly higher in the general information items (sub-index 3) and the boards of directors' report (sub-index 7). The effect of audit firm will be investigated further using multivariate analysis in chapter 9.

8.5.2.4 Type of business activity

The previous literature suggested that there might be a difference in the disclosure indices of different companies according to their type of activity (e.g. Stanga, 1976 and El-Modahki, 1995). The results were not consistent in different studies. Therefore, a two-tailed test was performed. In Egypt, all companies, whether industrial or non-industrial, are subject to the same disclosure requirements. Table 8. 13 shows the results of the Wilcoxon-Mann-Whitney test of the indices of industrial companies and non-industrial companies.

Table 8. 13 Wilcoxon-Mann-Whitney test of the indices of industrial companies and non-industrial companies

Disclosure index	industrial companies mean rank (53 cases)	non-industrial companies mean rank (19 cases)	2-tailed p
CA index Companies Act	38.45	31.05	.1859
CML index Capital Market Law	39.92	26.97	.0207
IASs index International accounting standards	40.85	25.37	.0032
pCML_A index Partial CML Arabic	39.47	28.21	.0442
pIAS _{SNA} index partial IASs not Arabic	37.69	33.18	.3813
sub-index 1 Balance sheet items CA + CML + IASs	39.26	28.79	.0499
sub-index 2 Income statement items CA + CML + IASs	37.73	33.08	.3443
sub-index 3 General information items CA + CML + IASs	36.81	35.63	.8217
sub-index 4 Balance sheet items CML + IASs	38.93	29.71	.0710
sub-index 6 Items in the notes including accounting policies CML + IASs	40.79	24.53	.0036
sub-index 7 Board of directors report items CA + CML	27.04	26.88	.9739
sub-index 8 Statement of resources and application of funds items CML only	37.44	33.87	.4493
sub-index 9 Cash flow statement items IASs only	37.27	34.34	.5475

Table 8. 13 shows that there are significant differences between industrial companies and non-industrial companies in the indices for CML, IASs, pCML_A indices and sub-indices 1 and 6. There was no prior expectation because there are no specific additional disclosure requirements for either industrial or non-industrial companies. The results indicate that the industrial companies ranked higher in relation to balance sheet items of the CA. CML

and IASs (sub-index 1) and in the notes to the accounts (sub-index 6). The effect of industry type will be investigated further using multivariate analysis in chapter 9.

8.5.3 Timeliness

Timeliness has been tested by the Wilcoxon-Mann-Whitney test. There was no significant difference in timeliness for comparisons of public sector versus private sector companies, traded versus non-traded shares, 'big six' versus other audit firms, industrial versus non-industrial companies, and no significant correlation with any of the continuous variables has been found.

8.6 Summary and conclusions

The following sections summarise the testing of hypothesis H_2 and hypothesis H_3 by univariate analysis.

8.6.1 Testing hypothesis H_2

In this chapter tests of comparisons of the CA with each of the CML and the IASs and comparisons of the partial CML (Arabic) with the partial IASs (not Arabic) has been reported. The comparison of the CA with each of the CML and the IASs allowed evaluation of a long-established part of the regulatory framework, compared with relatively new regulations. The comparison of the two partial indices was designed to allow evaluation of the 'language barrier' described in chapter 4. The analysis of the annual reports of Egyptian listed companies revealed a higher level of compliance with the CA disclosure requirements than with the CML or with the IASs. This can be explained in the context that the CML and the IASs were relatively new regulations at the date of this study, in contrast with the CA which had existed since 1981. The analysis

also revealed that there was a higher level of compliance with those aspects of the CML regulations which were appended in an Arabic translation 'partial CML Arabic', when compared with the additional requirements of the IASs which were not available in an official Arabic translation. This supports the idea that there is a problem with a 'language barrier', as defined in chapter 4 in terms of:

- Lack of availability of an official Arabic translation.
- Lack of access to an official Arabic translation.
- Lack of availability of technical support.

As explained in chapter 4, several companies have expressed their concern about the non-availability of an official Arabic translation. Others contacted the CMA for a translation and technical support but found these were not available there.

This research provided evidence that familiarity with the regulations and language of regulations have an effect on disclosure. This finding might be similar to that of previous research. Tai et al. (1990) found that lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements. This issue has policy implications for the Capital Market Authority which are discussed further in chapter 10.

8.6.2 Theoretical implications

The analysis of the 1995 annual reports of 72 Egyptian listed companies (H2) provided evidence that familiarity and language have an effect on disclosure which might be similar to the results of previous research. Tai et al. (1990) found that lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements. This also is related to the issue of compliance costs compared to non-compliance costs discussed in section

2.2.5. From these results it can be concluded that common disclosure theories (e.g. agency theory, capital need theory) are too simplistic as they do not cover many other factors which might affect disclosure such as language and familiarity and the capacity of the company in terms of compliance costs.

8.6.3 Univariate testing of H3

The relationship between the disclosure indices and nine company characteristics was investigated using univariate analysis, which revealed that company size, expressed either in terms of sales or of assets, was the continuous variable most highly correlated with the disclosure indices. It also revealed that being a public sector company and having shares traded in the stock exchange were factors which had a higher mean rank of each total index (CA, CML, IASs) than private sector companies or those whose shares were not traded. The ranks were also higher for most of the sub-indices and the exceptions have been discussed in the relevant sections. The mean rank of the IASs indices for companies audited by one of the 'big six' audit firms was significantly higher than the mean rank of indices for companies audited by other firms.

The findings from the univariate analysis justify carrying out multivariate analysis to investigate the relationship between the disclosure indices and companies' characteristics which take into consideration any interaction between independent variables. The results of the multivariate analysis and its theoretical implications are reported in chapter 9.

APPENDIX 8.1

Stem-and-leaf Plots for the total indices

Figure A8. 1 Stem-and-Leaf plot of the CA score

Frequency	Stem &	Leaf
3.00	Extremes	(.68), (.73), (.76)
1.00	7 .	9
1.00	8 *	0
12.00	8 .	5557788999999
20.00	9 *	00111111122233333444
32.00	9 .	5555555555556667777777777777777777
3.00	10 *	000

Stem width: .10
Each leaf: 1 case(s)

Figure A8. 2 Stem-and-Leaf plot of the CML score

Frequency	Stem &	Leaf
2.00	5 *	24
1.00	5 .	5
2.00	6 *	03
8.00	6 .	55588999
17.00	7 *	00001112223334444
9.00	7 .	555567788
7.00	8 *	0123344
9.00	8 .	555678888
10.00	9 *	0111233334
7.00	9 .	5556778

Stem width: .10
Each leaf: 1 case(s)

Figure A8. 3 Stem-and-Leaf plot of the IASs score

Frequency	Stem &	Leaf
2.00	5 .	68
.00	6 *	
2.00	6 .	56
7.00	7 *	0123344
19.00	7 .	5555666666666778999
11.00	8 *	00000122344
13.00	8 .	5577788888999
12.00	9 *	000123334444
6.00	9 .	555678

Stem width: .10
Each leaf: 1 case(s)

CHAPTER 9

9. MULTIVARIATE TESTING OF HYPOTHESIS H_3

9.1 Introduction

The univariate analysis, reported in chapter 8, showed that there is a significant relationship between disclosure indices and various company characteristics. Therefore a multivariate analysis is reported in this chapter which investigates the relationships after taking into consideration any interaction between independent variables. The multivariate analysis was carried out using multiple regression analysis. The details of this procedure have been explained in chapter 6.

The following equation provided the basis of the OLS regression estimations:

$$\text{index}_j = B_0 + B_1 \text{ level of share trading in SE}_j + B_2 \text{ audit firm type}_j + B_3 \text{ type of activity}_j + B_4 \text{ gearing}_j + B_5 \text{ liquidity}_j + B_6 \text{ profit ratio}_j + B_7 \text{ legal form}_j + B_8 \text{ assets}_j + B_9 \text{ sales}_j + e_j$$

Where

index j = disclosure index for companies ($j = 1, \dots, 74$) as explained in detail in chapter 6.

B_0 = the intercept

e_j = the residual

Transformation of variables is presented in section 9.2. Collinearity between independent variables and alternative combinations is discussed in section 9.3. Regression models of the total indices are presented in section 9.4. Regression models of the partial indices are presented in section 9.5. Regression models of each of the sub-indices are presented in section 9.6. Summary and conclusion are outlined in section 9.7.

9.2 Transformation of variables

Because of the non-normality of distributions of most of the disclosure indices and the continuous independent variables, it was preferable to transform the indices and the continuous independent variables into percentile ranks and normal scores. Transformations were applied in previous research using percentile ranks (Lang and Lundholm, 1993) and normal scores (Cooke, 1998), as explained in detail in chapter 6. Table 9.1 shows the transformations of the total scores as an illustration of the process.

The results of the untransformed models were excluded from the comparison. Only the ranked variables models and normal scores models were reported and used in the comparison between models, using $\text{adj}R^2$ and mean square error (MSE) as explained in detail in chapter 6.

Table 9. 1 Descriptive statistics of the untransformed and transformed disclosure indexes

	CA index			CML index			IAS index		
	Untrans- formed	Percentile rank ¹	Normal scores ²	Untrans- formed	Percentile rank	Normal scores	Untrans formed	Percentile rank	Normal scores
Mean	.9274	.5000	-.0017	.7944	.5000	.0000	.8297	.5000	.0000
Standard deviation	.0606	.2947	.9511	.1139	.2948	.9557	.0913	.2948	.9558
Minimum	.6842	.0000	-2.2058	.5260	.0000	-2.2058	.5717	.0000	-2.2058
Maximum	1.0000	.9859	1.9205	.9831	1.0000	2.2058	.9828	1.0000	2.2058
Median	.9487	.5000	.0000	.7707	.5000	.0000	.8207	.5000	.0000
Kolmogorov-Smirnov (Lilliefors-Significance) ³	.0003	>.2000	>.2000	.1819	>.2000	>.2000	>.2000	>.2000	>.2000
Normality can be rejected	yes	no	no	no	no	no	no	no	no

Notes:

1. The ranks in percentile form are based on Lang and Lundholm (1993) and were calculated using the formula:

percentile rank = (rank -1)/(n-1). The minimum is therefore 0 and the maximum 1.

2. The normal scores are as described in Cooke (1998), using the Van der Waerden approach carried out using the SPSS procedure “Van der Waerden” .

SPSS provides a significance level up to .200 but after that reports >.200. When the variable is converted to normal scores, necessarily the K-S statistic will be unity (Cooke, 1998).

9.3 Collinearity between independent variables and alternative combinations

All independent variables are either not significantly correlated or have a fairly weak correlation ($r < .54$) except legal form, assets and sales. These variables are highly correlated ($r \geq .70$). Therefore it was decided to avoid using these three variables together when running the regression. (See Appendix 9.1 for full table of correlation coefficients.) It was decided to use three combinations of independent variables for input to the regression equations as follows:

- Combination 1 (C1): share trading in SE, audit firm type, type of business activity, gearing, liquidity, profit ratio and **legal form**.
- Combination 2 (C2): share trading in SE, audit firm type, type of business activity, gearing, liquidity, profit ratio and **assets**.
- Combination 3 (C3): share trading in SE, audit firm type, type of business activity, gearing, liquidity, profit ratio and **sales**.

9.4 Regression models of total indices

In this section the regression models of the three total indices, CA, CML and IASs are presented. Full details of the regressions are available in Appendix 9.2 to the chapter, Tables A9.1 to A9.12. The analysis focuses on the relative importance of the independent variables by considering the increase in R^2 when a variable is entered into an equation that already contains the other independent variables (Norusis, 1993: 342). It is inappropriate to interpret the B 's as indicators of the relative importance of variables (ibid.) because the units in which the variables are measured are not the same (a mixture of categorical and continuous variables having different scales). In each of the following

sections the equation with the highest $\text{adj}R^2$ and the lowest MSE is reported in order to show which independent variables were significant in the equation. The R^2_{change} is reported for each of the significant variables to show their relative importance.

9.4.1 Companies Act (CA) index (Table A9.1)

In all the regression models of the CA:

- Share trading was significant and entered the equations.
- Gearing entered the equation when the variables were transformed into normal scores in the C1.
- Legal form was significant in both normal scores and ranks models in C1. Assets were significant in both normal scores and ranks models in C2.
- Sales were significant in both normal scores and ranks models in C3.

The ranked model in C1 provides the highest $\text{adj}R^2$ (.41) and the smallest MSE (.05). Therefore it was chosen for the CA index.

$$CA \text{ index} = .3288 + .1776 \text{ share trading} + .3041 \text{ legal form}$$

In this model 41% of the variation in the CA index is explained by variation in legal form and share trading. This result confirms and refines the results of the univariate analysis. In the model, legal form alone explains 34 % of the variation of the CA index. Share trading in SE explains 7% ($\text{adj}R^2$ change = 7%). Consequently, it appears that the legal form of a company is the best predictor of the CA index, at least among the variables included in the study. Public sector and traded companies disclosed more and rated a higher CA index than private and rarely traded companies.

9.4.2 Capital Market Law (CML) index (Table A9.2)

In all the regression models:

- Level of share trading was significant and entered the equations.
- Legal form was significant in both normal scores and ranks models in C1.
- Assets were significant in both normal scores and ranks models in combination C2.
- Sales were significant in both normal scores and ranks models in C3.

The ranked model in C1 provides the highest $\text{adj}R^2$ (.50) and the smallest MSE (.04) .

Therefore it was chosen for the CML index.

$$\text{CML index} = .3026 + .2647 \text{ share trading} + .2649 \text{ legal form}$$

In this model 50% of the variation in the CML index is explained by variation in legal form and activity of share trading. This result confirms and refines the results of the univariate analysis. In the model, level of share trading of a company explains 35 % of the variation of the CML index. Legal form explains 15% ($R^2\text{change} = 15\%$). Consequently, it appears that the level of share trading of a company is the best predictor of the CML index, at least among the variables included in the study. Public sector and traded companies disclosed more and rated a higher CML index than private and rarely traded companies.

9.4.3 International Accounting Standards (IASs) index (Table A9.3)

In all the regression models:

- Audit firm, type of activity and gearing were significant and entered the equations.
- Level of share trading of a company entered in the normal score model of first combination.

- Liquidity entered in all combinations except in the normal score C1.
- Legal form was significant in both normal scores and ranks models in C1.
- Assets were significant in both normal scores and ranks models in C2.
- Sales were significant in both normal scores and ranks models in C3.

The ranked model in C1 provides the highest $\text{adj}R^2$ (.53) and the smallest MSE (.04) . Therefore it was chosen for the IASs index.

$$\text{IASs index} = .4209 + .3445 \text{ audit firm} + .2620 \text{ type of activity} - .3828 \text{ gearing} - .1822 \text{ liquidity} + .3909 \text{ legal form}$$

In this model 53% of the variation in the IASs index is explained by variation in audit firm, type of activity, gearing, liquidity and legal form. In the model, audit firm explains 20% of the variation of the IASs index. Legal form explains 14% ($R^2\text{change} = 14\%$). Type of activity (13%), gearing (4%) and liquidity (2%). Consequently it appears that the audit firm type is the best predictor of the IASs index, at least among the variables included in the study. Public sector, industrial companies having lower gearing and liquidity ratios and being audited by one of the 'big six' disclosed more and rated a higher IASs index than other companies.

9.5 Regression models of partial indices

This section extracts from Appendix 9.2 those variables which are significant in the various regression models. It then selects, for each partial, the model which gives the best explanation as indicated by $\text{adj}R^2$ and MSE. This research follows the advice of Cooke (1998) in that several models were used to investigate the data. Therefore when a conclusion is drawn, it is stronger and the whole picture becomes clearer. For this study,

Cooke's approach has helped in distinguishing the strongest variables affecting disclosure in Egypt. The following sections report the details of the regressions of the sub-indices.

9.5.1 Partial CML Arabic ($pCML_A$) (Table A9.4)

For the partial CML (Arabic) index the $_{adj}R^2$ is approximately 0.40 for all combinations of ranks. Any of these models could be chosen for the $pCML_A$. One example is shown in Table 9.2. From the regression, share trading appears to be the best predictor of $pCML_A$ ($_{adj}R^2$ change = 31%). Share trading is the only variable to enter the equation apart from either legal form, assets or sales ($_{adj}R^2$ change for each = 9%). All models indicate that larger public companies, measured either by sales or by assets, which have shares traded in the stock exchange, rated higher indices in the Arabic part of the CML disclosure requirements.

9.5.2 Partial IASs not-Arabic ($pIAS_{NA}$) (Table A9.5)

For the partial IASs (non-Arabic) index the type of audit firm is the only variable to enter the equation apart from legal form, assets or sales. The highest $_{adj}R^2$ (0.21) and the lowest MSE (0.03) is achieved in the combination C1 (ranks). The equation of this model is:

$$pIAS_{NA} = 0.5577 + 0.1822 \text{ audit firm} + 0.1798 \text{ legal form}$$

In this model 21% of the variation in the $pIAS_{NA}$ index is explained by variation in legal form and audit firm. This result confirms and refines the results of the univariate analysis. In the model, audit firm alone explains 13% of the variation of the $pIAS_{NA}$ index, while legal form explains 8% ($_{adj}R^2$ change = 8%). Consequently, it appears that the audit firm of a company is the best predictor of the $pIAS_{NA}$ index, at least among the

variables included in the study. Public sector companies and those audited by one of the 'big six' disclosed more and rated a higher $pIAS_{NA}$ index than other companies.

9.6 Regression model for each sub-index

In this section the regression models of the sub- indices are presented.

9.6.1 Sub-index 1 Balance sheet items required by IASs + CML + CA

(Table A9.6)

Type of business activity entered the equation when the variables were transformed into normal scores in the C2. Level of share trading was significant in the normal model in C1. Assets were significant in both normal scores and ranks models in C2. Sales were significant in both normal scores and ranks models in C3.

The ranked model in C3 provides the highest $adjR^2$ (.32) and the smallest MSE (.09). Therefore it was chosen for the sub-index 1.

$$Sub - index 1 = .2339 + .7373 sales$$

In this model 32% of the variation in sub-index 1 is explained by variation in size expressed by sales. Larger companies (sales) disclosed more and rated a higher sub-index1 than smaller companies.

9.6.2 Sub-index 2 Income statement items required by IASs + CML + CA

(Table A9.7)

Legal form was significant in both normal scores and ranks models in C1. Assets were significant in both normal scores and ranks models in C2. Sales were significant in both

normal scores and ranks models in C3, and audit firm in both the normal score and ranked models of C1.

The ranked model in C1 provides the highest $\text{adj}R^2$ (.24) and the smallest MSE (.12). Therefore it was chosen for sub-index 2.

$$\text{Sub-index 2} = .4837 + .2186 \text{ audit firm} + .4611 \text{ legal form}$$

In this model 24% of the variation in sub-index 2 is explained by variation in legal form and audit firm. In the model, legal form alone explains 21 % of the variation of sub-index 2. Audit firm explains 3% ($\text{adj}R^2$ change = 3%). Consequently, it appears that the legal form of a company is the best predictor of sub-index 2, at least among the variables included in the study. Public sector companies and those audited by one of the ‘big six’ disclosed more and rated a higher sub-index 2 than private and rarely traded companies.

9.6.3 Sub-index 3 general information items required by IASs + CML + CA (Table A9.8)

Legal form was significant in both normal scores and ranks models in C1. Assets were significant in both normal scores and ranks models in C2. Sales were significant in both normal scores and ranks models in C3. Audit firm was significant in both the normal score and ranked modes of C2 and C3. Level of share trading was significant and entered the equation in the normal score model of C1.

The ranked model in C1 provides a relatively high $\text{adj}R^2$ (.28) and the smallest MSE (.08). Therefore it was chosen for sub-index 3.

$$\text{sub-index 3} = .5229 + .3824 \text{ legal form}$$

In this model 28% of the variation in sub-index 3 is explained by variation in legal form. Consequently, it appears that the legal form of a company is the only predictor of sub-index 3, at least among the variables included in the study. Public sector companies disclosed more and rated a higher sub-index 3 than private companies.

9.6.4 Sub-index 4 Balance sheet items required by IASs + CML (No table)

No variable entered the equations of this sub-index.

9.6.5 Sub-index 6 Income statement items required by IASs + CML (Table A9.9)

For the sub-index 6 the $\text{adj}R^2$ is approximately 0.20 and $\text{MSE} = .07$ for all combinations of ranks. Any of these models could be chosen for sub-index 6. Audit firm and type of activity are the two variables in the equation. Legal form, assets and sales were not significant in any model of ranks. Therefore there was no effect of changing combinations. The three combinations produced exactly the same equation.

$$\text{Sub-index 6} = .2844 + .2291 \text{ audit firm} + .2424 \text{ type of activity}$$

Audit firm and type of activity appear to be the best predictors of sub-index 6 ($\text{adj}R^2$ change = 10% each). All models indicate that industrial companies audited by one of the big six rated higher indices in disclosure requirements to be disclosed in the notes including accounting policies.

9.6.6 Sub-index 7 Items in the notes including accounting policies required by CML + CA (Table A9.10)

For the sub-index 6 the $\text{adj}R^2$ is approximately 0.16 and $\text{MSE} = .05$ for all combinations of ranks. Any of these models could be chosen for sub-index 7. Share trading and audit firm are the two variables in the equation. Legal form, assets and sales were not significant in any model of ranks. Therefore there was no effect of changing combinations. The three combinations produced exactly the same equation.

$$\text{Sub-index 7} = .5347 + .1499 \text{ share trading} + .2170 \text{ audit firm}$$

Audit firm appears to be the best predictor of Sub-index 7 ($\text{adj}R^2\text{change} = 9\%$). Share trading explains 7% of sub-index 7 ($\text{adj}R^2\text{change} = 7\%$) All models indicate that traded companies, audited by one of the 'big six' rated higher indices in Board of directors report disclosure requirements.

9.6.7 Sub-index 8 Items required by CML (Table A9.11)

For the sub-index 8, share trading is the only variable to enter the equation apart from legal form, assets or sales. The highest $\text{adj}R^2$ (0.36) and the lowest MSE (0.02) is achieved in the combination C1 (ranks). The equation of this model is:

$$\text{sub-index 8} = 0.6499 + 0.1131 \text{ share trading} + 0.1831 \text{ legal form}$$

In this model 36% of the variation in the sub-index 8 is explained by variation in legal form and share trading. This result confirms and refines the results of the univariate analysis. In the model, legal form alone explains 30% of the variation of sub-index 8, while share trading explains 6% ($\text{adj}R^2\text{change} = 6\%$). Consequently, it appears that the

legal form of a company is the best predictor of the sub-index 8, at least among the variables included in the study. Public sector and traded companies disclosed more and rated a higher sub-index 8 than other companies.

9.6.8 Sub-index 9 Items required by IASs (Table A9.12)

For the sub-index 9 the type of audit firm is the only variable to enter the equation apart from either legal form, assets or sales. The highest $_{adj}R^2$ (0.19) and the lowest MSE (0.02) is achieved in the combination C1 (ranks). The equation of this model is:

$$\text{sub-index 9} = 0.6303 + 0.1444 \text{ audit firm} + 0.1551 \text{ legal form}$$

In this model 19% of the variation in the sub-index 9 is explained by variation in legal form and audit firm. This result confirms and refines the results of the univariate analysis. In the model, audit firm alone explains 10 % of the variation of sub-index 9, legal form explains 9% ($_{adj}R^2\text{change} = 9\%$). Consequently, it appears that the audit firm of a company is the best predictor of the sub-index 9, at least among the variables included in the study. Public sector companies and those audited by one of the ‘big six’ disclosed more and rated a higher sub-index 9 than other companies.

9.7 Summary and conclusion

This section presents a summary of the results and discusses the theoretical implications.

9.7.1 Summary of results

Table 9.2 summarises the models chosen in this section for each disclosure index, based on the regressions reported in Appendix 9.2 to this chapter. It also shows the $_{adj}R^2$ change for each variable in the equation. This gives the amount of the total $_{adj}R^2$ which is

explained by the particular variable. The best predictor for each index or sub-index is highlighted in bold as the variable with the highest $\text{adj}R^2$ change.

It appears that there are three company characteristics which are strong in explaining disclosure practices of Egyptian listed companies. These are:

- Being a public company
- Having shares traded in the Stock Exchange
- Being audited by one of the 'big six' audit firms.

Two other characteristics had an association with disclosure. Having a high level of sales gave the best explanation of the disclosure of balance sheet items required by the CA, CML and IASs. Being an industrial company contributed to explaining the disclosure of information in notes and accounting policies as required by the CML and the IASs.

Table 9. 2 The models chosen for each disclosure index

Index	Chosen model	adjR ²	MSE
CA adjR ² change	CA index = .3288 + .1776 share trading + .3041 legal form .07 .34	.41	.05
CML adjR ² change	CML index = .3026+ .2647 share trading + .2649 legal form .35 .15	.50	.04
IASs adjR ² change	IASs index = .4209+.3445 audit firm+.2620 type of activity-.3828 gearing -.1821 liquidity + .3909 legal form .20 .13 .04 .02 .14	.53	.04
pCML _A adjR ² change	pCML _A index = .3245 + .2666 share trading + .2023 legal form .31 .09	.40	.05
pIAS _{NA} adjR ² change	pIAS _{NA} index = 0.5577 + 0.1822 audit firm + 0.1798 legal form .13 .08	.21	.03
Sub-index 1 adjR ² change	Sub - index 1 = .2339 + .7373 sales .32	.32	.10
Sub-index 2 adjR ² change	Sub-index 2 = .4837 + .2186 audit firm + .4611 legal form .03 .21	.24	.12
Sub-index 3 adjR ² change	sub-index 3 = .5229 +.3824 legal form .28	.28	.08
Sub-index 6 adjR ² change	Sub-index 6 = .2844 + .2291 audit firm + .2424 type of activity 0.10 0.10	.20	.07
Sub-index 7 adjR ² change	Sub-index 7 = .5347 + .1499 share trading + .2170 audit firm .07 .09	.16	.05
Sub-index 8 adjR ² change	sub-index 8 = 0.6499 + 0.1131 share trading + 0.1831 legal form .06 .30	.36	.02
Sub-index 9 adjR ² change	sub-index 9 = 0.6303 + 0.1444 audit firm + 0.1551 legal form .10 .09	.19	.02

The findings of the univariate analysis (chapter 8) were confirmed and refined by an extensive multivariate analysis applied to the total, partial and sub-indices, using ranked regression and regression based on normal scores. For each of the 13 calculated indices, six models were produced. The 'best fit' model was chosen on the basis of the highest R^2 and the lowest mean square error (MSE).

The detailed analysis contained in the chapter for the total indices, partial indices and sub-indices contributes to forming a strong conclusion about each section of the annual report, as explained in the relevant sections of the chapter.

From the multivariate analysis it appears that there are three company characteristics which are strong in explaining disclosure practices of Egyptian listed companies. These are:

- Being a public company which are the largest in size
- Having shares traded in the Stock Exchange
- Being audited by one of the 'big six' audit firms.

9.7.2 Theoretical implications

The disclosure indices of the 1995 annual reports of the 72 Egyptian listed companies were tested for any association with company characteristics. The theoretical explanation of the company characteristics which were found to be significantly related to disclosure indices of Egyptian listed companies are as follows:

- Being a public sector company reflected two other factors; largest in size and intending to offer shares in the near future as a part of the privatisation programme. This is consistent with both capital need theory (intending to issue securities in the near future), agency theory (they are the largest in size) and political costs (they are in the

public eye of the government). As part of the privatisation programme these public companies were planning to issue shares in the near future. It has been shown in previous research (see Lang and Lundholm, 1993 and Morris, 1987 for more detail) that companies which plan to issue shares in the near future show an improvement in disclosure in the period before the date of issue. It is important to note that public companies are the largest listed companies, measured by sales and assets. These three company characteristics were highly correlated and so size is also a strong explanatory variable for disclosure practice in Egypt. It is consistent with previous research to find that size is a characteristic which is strongly associated with disclosure (see chapter 2 for more detail).

- Having shares traded in the Stock Exchange is consistent with previous literature (see chapter 2) which has drawn on agency theory and capital need theory to show that companies which have a relatively large number of shareholders provide better disclosure in order to reduce the agency costs and to collect capital more easily. Share trading might also reflect corporate culture (closed companies disclose less) and the orientation of their managers.
- Being audited by one of the 'big six' audit firms is particularly important in relation to those aspects of disclosure which are regulated by the International Accounting Standards but for which there is no official Arabic translation available in Egypt. This proved that familiarity and language of regulations can affect disclosure. These factors are not covered by any of the disclosure theories discussed in the literature review. The findings of this chapter have policy implications which can lead to recommendations regarding the role of the CMA and accounting practice for companies in Egypt. These policy implications are explored in Chapter 10 and recommendations are made there.

APPENDIX 9.1

Correlation coefficients for independent variables

- - - S P E A R M A N C O R R E L A T I O N C O E F F I C I E N T S - - -

AUDITFIR	-.1424					
	N(72)					
	Sig .233					
TYPACTV	.2989	-.0808				
	N(72)	N(72)				
	Sig .011	Sig .500				
GEARING	.2140	-.3118	.0794			
	N(72)	N(72)	N(72)			
	Sig .071	Sig .008	Sig .507			
LIQUIDIT	-.1888	.0074	.0485	-.1790		
	N(72)	N(72)	N(72)	N(72)		
	Sig .112	Sig .951	Sig .686	Sig .132		
PROFRATI	.3509	-.1045	.1130	.1409	.1659	
	N(72)	N(72)	N(72)	N(72)	N(72)	
	Sig .003	Sig .382	Sig .345	Sig .238	Sig .164	
LEGALFOR	.3528	-.3741	.0395	.4784	-.1587	.3559
	N(72)	N(72)	N(72)	N(72)	N(72)	N(72)
	Sig .002	Sig .001	Sig .742	Sig .000	Sig .183	Sig .002
ASSETS	.4939	-.1810	.0364	.4852	-.1203	.4670
	N(72)	N(72)	N(72)	N(72)	N(72)	N(72)
	Sig .000	Sig .128	Sig .762	Sig .000	Sig .314	Sig .000
SALES	.5314	-.1654	.1994	.4883	-.0758	.5122
	N(72)	N(72)	N(72)	N(72)	N(72)	N(72)
	Sig .000	Sig .165	Sig .093	Sig .000	Sig .527	Sig .000
	SHARTRAD	AUDITFIR	TYPACTV	GEARING	LIQUIDIT	PROFRATI
ASSETS	.7264					
	N(72)					
	Sig .000					
SALES	.6984	.8990				
	N(72)	N(72)				
	Sig .000	Sig .000				
	LEGALFOR	ASSETS				

(Coefficient / (Cases) / 2-tailed Significance)

" . " is printed if a coefficient cannot be computed

APPENDIX 9.2

Tables of regression models for Combinations 1, 2 and 3

In all the following tables, where an item is significant the upper value in the cell represents the B coefficient and the lower value represents the significance of the *t*-statistic. The symbol 'X' indicates that the variable did not enter the equation; 'NT' indicates that the variable was not tested in the model.

Table A9. 1 Stepwise regression analysis of determinants of CA indices by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.5668 .0050	.1776 .0036	.5830 .0116	.1493 .0281	.5970 .0125	.1401 .0458
Audit firm	X	X	X	X	X	X
Type of activity	X	X	X	X	X	X
Gearing	-.3192 .0373	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	1.1471 .0000	.3041 .0000	NT	NT	NT	NT
Assets	NT	NT	.3795 .0017	.4495 .0001	NT	NT
Sales	NT	NT	NT	NT	.3417 .0060	.4463 .0002
Constant	-.5025 .0001	.3288 .0000	-.2064 .1251	.2209 .0002	-.2120 .1247	.2262 .0002
adjR ²	.41	.41	.30	.35	.28	.34
MSE	.58	.05	.68	.06	.71	.06

Table A9. 2 Stepwise regression analysis of determinants of CML indices by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.8785 .0000	.2647 .0000	.8004 .0001	.2242 .0003	.7726 .0002	.2105 .0007
Audit firm	X	X	X	X	X	X
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	.7617 .0001	.2649 .0000	NT	NT	NT	NT
Assets	NT	NT	.3760 .0004	.4456 .0000	NT	NT
Sales	NT	NT	NT	NT	.3821 .0004	.4569 .0000
Constant	-.6141 .0000	.3026 .0000	-.3186 .0070	.1880 .0003	-.3073 .0098	.1878 .0003
adjR ²	.46	.50	.44	.49	.44	.49
MSE	.49	.04	.51	.04	.51	.04

Table A9. 3 Stepwise regression analysis of determinants of IASs indices by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.3313 .0853	X	X	X	X	X
Audit firm	1.0323 .0000	.3445 .0000	.6906 .0018	.2469 .0002	.7565 .0015	.2315 .0010
Type of activity	.6942 .0008	.2620 .0000	.8338 .0000	.2589 .0000	.6611 .0027	.2048 .0013
Gearing	-.3172 .0268	-.3828 .0075	-.3368 .0197	.3910 .0084	X	-.3590 .0252
Liquidity	X	-.1821 .0320	-.2023 .0263	-.2131 .0145	-.2291 .0215	-.2379 .0114
Profit ratio	X	X	X	X	X	X
Legal form	1.1227 .0000	.3909 .0000	NT	NT	NT	NT
Assets	NT	NT	.5442 .0000	.5776 .0000	NT	NT
Sales	NT	NT	NT	NT	.3743 .0004	.5027 .0000
Constant	-1.1514 .0000	.4209 .0001	-.6519 .0004	.3109 .0056	-.6384 .0012	.3847 .0014
adjR ²	.46	.53	.45	.51	.34	.43
MSE	.49	.04	.50	.04	.60	.05

Table A9. 4 Stepwise regression analysis of determinants of pCML_A indices by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.8956 .0000	.2666 .0000	.7963 .0002	.2296 .0005	.7879 .0003	.2218 .0011
Audit firm	X	X	X	X	X	X
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	.5792 .0051	.2023 .0013	NT	NT	NT	NT
Assets	NT	NT	.3303 .0026	.3610 .0010	NT	NT
Sales	NT	NT	NT	NT	.3189 .0044	.3597 .0015
Constant	-.5533 .0000	.3245 .0000	-.3126 .0116	.2291 .0001	-.3091 .0140	.2329 .0000
adjR ²	.37	.40	.39	.40	.38	.39
MSE	.57	.05	.56	.05	.57	.05

Table A9. 5 Stepwise regression analysis of determinants of pIASs_{NA} indices by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	X	X	X	X	X	X
Audit firm	.5378 .0270	.1822 .0008	X	.1374 .0072	X	.1284 .0147
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	.7775 .0003	.1798 .0001	NT	NT	NT	NT
Assets	NT	NT	.3348 .0008	.2617 .0003	NT	NT
Sales	NT	NT	NT	NT	.2547 .0125	.2094 .0045
Constant	X	.5577 .0000	.5840 .0000	.4985 .0000	.5842 .0000	.5266 .0000
adjR ²	.16	.21	.14	.19	.07	.13
MSE	.58	.03	.59	.03	.64	.03

Table A9. 6 Stepwise regression analysis of determinants of sub-index 1 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.7054 .0495	X	X	X	X	X
Audit firm	X	X	X	X	X	X
Type of activity	X	X	.7270 .0424	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	
Legal form	.9121 .0144	.3117 .0006	NT	NT	NT	NT
Assets	NT	NT	.7144 .0000	.6418 .0000	NT	NT
Sales	NT	NT	NT	NT	.8449 .0000	.7373 .0000
Constant	X	.4945 .0000	.0790 .7942	.2816 .0005	.6412 .0001	.2339 .0021
adjR ²	.16	.14	.23	.24	.28	.32
MSE	1.89	.12	1.73	.11	1.63	.10

Table A9. 7 Stepwise regression analysis of determinants of sub-index 2 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	X	X	X	X	X	X
Audit firm	.8572 .0464	.2186 .0478	X	X	X	X
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	1.7933 .0000	.4611 .0000	NT	NT	NT	NT
Assets	NT	NT	.7293 .0000	.6042 .0001	NT	NT
Sales	NT	NT	NT	NT	.5939 .0016	.5126 .0010
Constant	X	.4837 .0000	.9978 .0000	.3872 .0000	.9981 .0000	.4330 .0000
adjR ²	.24	.24	.19	.19	.12	.13
MSE	1.82	.12	1.95	.13	2.12	.14

Table A9. 8 Stepwise regression analysis of determinants of sub-index 3 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.5803 .0486	X	X	X	X	X
Audit firm	X	X	-.8952 .0153	-.2139 .0189	-.8789 .0144	-.2161 .0165
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	-.3154 .0379	X
Profit ratio	X	X	X	X	X	X
Legal form	1.3473 .0000	.3824 .0000	NT	NT	NT	NT
Assets	NT	NT	.4870 .0024	.4377 .0007	NT	NT
Sales	NT	NT	NT	NT	.4887 .0018	.4577 .0004
Constant	X	.5229 .0000	.9805 .0000	.4813 .0000	.9812 .0000	.4718 .0000
adjR ²	.32	.28	.19	.22	.24	.24
MSE	1.27	.08	1.50	.09	1.41	.09

Table A9. 9 Stepwise regression analysis of determinants of sub-index 6 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	X	X	X	X	X	X
Audit firm	.5991	.2291	.5991	.2291	.5991	.2291
	.0211	.0037	.0211	.0037	.0211	.0037
Type of activity	.8516	.2424	.8516	.2424	.8516	.2424
	.0004	.0010	.0004	.0010	.0004	.0010
Gearing	-.3417	X	-.3417	X	-.3417	X
	.0322		.0322		.0322	
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	X	X	NT	NT	NT	NT
Assets	NT	NT	X	X	NT	NT
Sales	NT	NT	NT	NT	X	X
Constant	-.6063	.2844	-.6063	.2844	-.6063	.2844
	.0052	.0000	.0052	.0000	.0052	.0000
adjR ²	.24	.20	.24	.20	.24	.20
MSE	.72	.07	.72	.07	.72	.07

Table A9. 10 Stepwise regression analysis of determinants of sub-index 7 by Egyptian listed companies (n = 53)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.7528	.1499	.7528	.1499	.7528	.1499
	.0017	.0140	.0017	.0140	.0017	.0140
Audit firm	.8153	.2170	.8153	.2170	.8153	.2170
	.0106	.0159	.0106	.0159	.0106	.0159
Type of activity	-.6207	X	-.6207	X	-.6207	X
	.0225		.0225		.0225	
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	X	X	NT	NT	NT	NT
Assets	NT	NT	X	X	NT	NT
Sales	NT	NT	NT	NT	X	X
Constant	.4449	.5347	.4449	.5347	.4449	.5347
	.0411	.0000	.0411	.0000	.0411	.0000
adjR ²	.21	.16	.21	.16	.21	.16
MSE	.60	.05	.60	.05	.60	.05

Table A9. 11 Stepwise regression analysis of determinants of sub-index 8 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	.5581 .0057	.1131 .0057	.4472 .0339	.0884 .0429	X	X
Audit firm	X	X	-.5715 .0127	-.1125 .0165	-.5955 .0106	-.1201 .0107
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	.9031 .0000	.1831 .0000	NT	NT	NT	NT
Assets	NT	NT	.3914 .0005	.2518 .0009	NT	NT
Sales	NT	NT	NT	NT	.5094 .0000	.3382 .0000
Constant	.4786 .0002	.6499 .0000	.9555 .0000	.6209 .0000	1.1406 .0000	.6149 .0000
$\text{adj}R^2$.36	.36	.37	.36	.35	.35
MSE	.58	.02	.57	.02	.59	.02

Table A9. 12 Stepwise regression analysis of determinants of sub-index 9 by Egyptian listed companies (n = 72)

Independent variables	Combination 1		Combination 2		Combination 3	
	Nscore	P Rank	Nscore	P Rank	Nscore	P Rank
Share trading	X	X	X	X	X	X
Audit firm	.5680 .0180	.1444 .0028	X	.1051 .0210	X	.0960 .0426
Type of activity	X	X	X	X	X	X
Gearing	X	X	X	X	X	X
Liquidity	X	X	X	X	X	X
Profit ratio	X	X	X	X	X	X
Legal form	.7514 .0004	.1551 .0002	NT	NT	NT	NT
Assets	NT	NT	.3066 .0020	.2212 .0006	NT	NT
Sales	NT	NT	NT	NT	.2074 .0400	.1611 .0145
Constant	.3820 .0052	.6303 .0000	.7609 .0000	.5817 .0000	.76106 .0000	.6137 .0000
$\text{adj}R^2$.16	.19	.12	.16	.05	.09
MSE	.56	.02	.59	.02	.64	.02

CHAPTER 10

10. SUMMARY AND CONCLUSIONS

10.1 Introduction

In this chapter the findings and conclusions contained in the preceding chapters are summarised. The principal aim of this chapter is to bring together and accentuate the primary conclusions related to the objectives of the research. Accordingly, in section 10.2 a summary of the objectives of the research and the approach employed to achieve these objectives are provided. Section 10.3 presents the results and conclusions reached based upon the descriptive work, the theoretical and conceptual analysis and the empirical work. In section 10.4 some implications based upon the research findings and conclusions are offered. Section 10.5 is a summary of the contribution of this research. In section 10.6 strengths and limitations of the study are outlined. Section 10.7 contains some suggestions for further research.

10.2 Summary of objectives, questions and approach

In this section the general and specific research objectives, the empirical research questions and the research methods are outlined.

10.2.1 General and specific objectives

The general and specific objectives of this research were set out in sections 1.2 and 1.3 of chapter 1, as follows:

General research objectives

1. To make a contribution to the international accounting literature generally, and to the literature of accounting in developing countries specifically. In particular it aims to explore the applicability of disclosure theories in relation to emerging capital markets
2. To make a contribution to the academic literature on methods of measuring accounting disclosure in developing countries.

The approach taken in order to pursue these objectives was as follows:

- a) Theories of disclosure, related issues and the applicability of these theories to developing countries were reviewed in chapter 2. These theories have been employed as the framework for forming *a priori* expectations leading to hypotheses for testing by empirical analysis.
- b) The Egyptian environment was reviewed in chapter 3 which includes a review of the economic development, accounting profession development, development of the Egyptian Capital Market, the legal form of business culture and accounting education.
- c) The accounting standards and regulations in Egypt (as an example of a developing country) were described and compared with the IASs in chapter 4. The comparison showed that Egyptian accounting standards have been influenced by the IASs. This points to the urgency of considering any special needs of developing countries. In addition, issues related to familiarity and language in relation to their effect on disclosure were raised.

Specific empirical research objectives

The special objectives related to empirical questions were stated in chapter 1. These objectives are as follows:

1. To explore the effects of issuing the new CML, mandating the IASs and adopting a new economic policy of privatisation on disclosure on various levels of accounting disclosure by Egyptian listed companies.
2. To assess the extent of disclosure in corporate annual reports of Egyptian listed companies according to the requirements of various regulations (CA, CML and IASs) and to explore the effect of two new factors on disclosure (familiarity and language of regulations)
3. To provide empirical evidence on the characteristics of Egyptian listed companies in relation to the extent of mandatory information provided in their annual reports.

The approach taken in order to pursue these objectives was to perform a rigorous testing of accounting disclosure practices in the annual reports of a sample of Egyptian listed companies. The results of the analysis were reported in chapters 7, 8 and 9.

10.2.2 Empirical research questions

The main empirical research questions of this research are:

Empirical research question 1

To what extent did listed companies show indications of disclosing more information following the introduction of the CML?

Empirical research question 2

Empirical research question 2 is in three parts:

2(a) What is the level of compliance of Egyptian listed companies with the disclosure requirements of different laws and regulations (CA, CML, IASs)?

2(b) Do Egyptian listed companies differ in their level of compliance with the various laws and regulations?

2(c) Do Egyptian listed companies differ in their level of compliance with the additional requirements of the new CML according to the language of the requirements?

Empirical research question 3

Is there a significant association between any of the disclosure indices of a company and its characteristics?

10.2.3 Research methods

The main research methods used in this research were:

- using a disclosure index for measuring disclosure;
- using an unweighted scoring method;
- using the most commonly used approach to scoring of giving 1 if an item was disclosed and giving 0 if it was not;
- using both univariate and multivariate analysis to test the relation between disclosure and company characteristics.

The explanatory variables chosen to be tested in the current research are:

- Company size in terms of assets and sales
- Liquidity
- Profit ratio
- Gearing
- Audit firm (big six / non big six)
- Type of activity
- Timeliness

Another four variables specifically relevant to the Egyptian situation, introduced in chapters 3 and 4, have been also tested in the current research. These variables are:

- Legal form (public sector / private sector)
- Share trading in the Stock Exchange (traded / rarely traded)
- Familiarity with the regulations (established law versus new regulations)
- Language barrier (IASs appended in Arabic to the CML / IASs not appended in Arabic to the CML).

10.3 Results and main findings

In this section, a summary of the results and the conclusions is presented under the following four main headings:

1. Expectations on the applicability of disclosure theories in developing countries (chapter 2).
2. The economic, social and accounting environment in Egypt (chapter 3).
3. The current framework and accounting regulations (chapter 4).
4. The current disclosure practice by Egyptian listed companies (chapters 7, 8 and 9).

10.3.1 Expectations on the applicability of disclosure theories in developing countries

The most common theories which have been used in the previous literature to interpret disclosure practices were summarised in chapter 2. These were agency theory, capital need theory and signalling theory. In the context of these theories and the specific circumstances of Egypt *a priori* expectations of the research hypotheses have been formed, as explained in chapter 2.

Table 10.1 reproduces the prior expectations and their theoretical considerations which were set out in table 2.1. The final column in table 10.1 matches the relevant empirical results to the theoretical considerations and indicates where there is support or lack of support for the prior expectations. Further discussion is developed in section 10.4.

Table 10. 1 Summary of prior expectations, theoretical consideration and empirical support.

Hypothesis	Prior Expectations	Theoretical considerations	Empirical support
H1	A significant increase of the extent of disclosure in the annual reports of Egyptian listed companies is taking place, which could be the result of the issuance of the new CML, which mandated the IASs.	<ul style="list-style-type: none"> • Prescriptive regulatory approach versus free market approach 	<ul style="list-style-type: none"> • Regulating approach supported (chapter 7)
H2	<ul style="list-style-type: none"> • The level of compliance is less than 100% as non-compliance costs are not very high compared with compliance costs (part 1 of H2). • More insights and explanation of disclosure practices by Egyptian listed companies can be gained by subdividing the disclosure indices of the annual report according to its different parts. 	<ul style="list-style-type: none"> • Compliance costs compared with non-compliance costs • Strength of users' interest in earnings information • Corporate reporting culture of not disclosing notes to accounts. 	<ul style="list-style-type: none"> • Subdividing the disclosure indices has given more insights and has given more explanations on factors affecting disclosure (chapters 7, 8 & 9) • Income statements disclosure indices were already high in 1991, therefore no significant increase has taken place in 1995 (chapter 7). • the disclosure indices of the notes were low in 1991 but increased significantly in 1995 (chapter 7). • New factor explored in this research, which is likely to affect other emerging capital markets (chapter 8). • New factor explored in this research, which is likely to affect other emerging capital markets (chapter 8).
	<ul style="list-style-type: none"> • Familiarity with the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the established regulations will be higher than that of other parts • Language of the regulations will affect disclosure. Therefore, the level of disclosure of the part of the IASs which is included in the national regulations in Arabic will be higher than that of other parts. 	<ul style="list-style-type: none"> • No established theory covering this factor • Derived from situation of Egypt • No established theory covering this factor • Derived from situation of Egypt 	

H3	<ul style="list-style-type: none"> • The level of disclosure in the annual reports of Egyptian listed companies is positively related to a company's size (total sales and total assets). • There is a significant positive association between the level of disclosure of Egyptian listed companies and share trading. Actively traded companies will disclose more than rarely traded companies. • There is a significant positive association between the level of disclosure of Egyptian listed companies and legal form. Public sector companies will disclose more than private sector companies. • There is a significant positive association between the IASs disclosure of Egyptian listed companies and the type of audit firm. Companies audited by one of the 'big-six' will disclose more in terms of IASs requirements than companies audited by other audit firms. • There is a significant association between the levels of disclosure other than the IASs, of Egyptian listed companies and audit firm. • There is a significant association between the level of disclosure of Egyptian listed companies and gearing. • There is a significant association between the level of disclosure of Egyptian listed companies and liquidity. • There is a significant association between the level of disclosure of Egyptian listed companies and profit ratio. • There is a significant association between the level of disclosure of Egyptian listed companies and type of business activity. 	<ul style="list-style-type: none"> • Primarily agency theory but could also involve capital need • Adaptation of capital need theory to suit Egypt. • Capital need theory and political costs. • No established theory covers familiarity with the regulations. This is derived from the situation of Egypt. • Signalling and agency theories • Agency theory • Signalling theory • Signalling theory • Political costs and "follow the leader" approach. 	<ul style="list-style-type: none"> • Supported (chapter 9). • Supported (chapter 9). • Supported (chapter 9). • Supported (chapter 9). • Not supported (chapter 9). • Not supported (chapter 9). • Not supported (chapter 9). • Not supported (chapter 9). • Not supported (chapter 9).
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10.3.2 The economic, social and accounting environment in Egypt

From the review included in chapter 3, it was shown that Egypt has specific historical and environmental factors which distinguish the country from others. These factors are likely to affect disclosure practices.

It was shown in chapter 3 that Egypt in the past 50 years has experienced four very different types of economic policy. Each has had a different effect on the regulation of accounting and on the accounting profession, the stock exchange, the banking system and the financial system generally. These changes have affected the position of Egypt in the international academic classification of accounting practice, whether by institutional factors such as legal system or by culture and accounting sub-culture such as in Gray (1988). Accounting education in Egypt requires to be developed in order to meet the requirements of the new era of privatisation. At the end of the review, a number of issues which might affect disclosure practices in Egypt were highlighted to be investigated further in the empirical part of this research as follows:

- Changes in economic policies on accounting disclosure practices, especially the most recent change toward privatisation (H1, chapter 7).
- Anglo-American influence on accounting disclosure practices (H2, chapter 8).
- Changes in the capital market policies and regulations (H1, chapter 7).
- Lack of stringent action towards non-traded or rarely traded companies on their accounting disclosure practices (H3, chapter 8 and 9).
- Legal system of business which allows the formation of joint stock companies which are in most cases closed companies. These companies are allowed to be listed, although their shares are not traded (H3, chapter 8 and 9).

- Accounting education, which is mainly in Arabic. In the past there was no interest in the IASs. This means that most practitioners apparently do not possess an up-to-date knowledge of IASs (H2, chapter 8).

The results have been reported and discussed in chapters 7, 8 and 9.

10.3.3 The current framework and accounting regulations

It has been shown that the disclosure requirements of the CA, CML and IASs regulations overlap in some respects which have required care in the construction of the disclosure list, the analysis and the interpretation of results. The Charter of the Accounting and Auditing profession of 1958 is out of date and requires to be updated. The disclosure requirements of the CA of 1981 are not comprehensive compared with the disclosure requirements in developed countries, because the Act was issued in a period where external disclosure was not an important matter.

Most of the Egyptian Accounting Standards (EASs) were comparable with their extant IASs at the time the EASs were issued. These EASs are out of date and cannot replace a translation of the up-to-date issue of the IASs.

In 1993, the ERs of Capital Market Law has mandated the all IASs in areas not covered by national laws in an attempt to revitalise the Stock Exchange and to increase public confidence in financial reporting.

The review of the relevant regulations of listed companies in chapter 4 concluded that there are three overlapping regulations which have to be followed by Egyptian listed companies. These regulations are:

- The CA of 1981
- The CML of 1992

- The extant IASs.

Chapter 5 contained a further explanation of how a detailed list has been prepared for the disclosure requirements of each of these regulations which are the basis for a master disclosure list for mandatory requirements in the Egyptian Stock Exchange.

From the discussions of the relevant regulations in chapter 4, the following issues have been identified for investigation further in the empirical part of the thesis:

- The effect of the 1992/3 changes in the Stock Exchange regulations (three different but overlapping regulations) on accounting disclosure practices of Egyptian listed companies (chapter 7).
- The effect of familiarity with those parts of the IASs requirements which have been included in the established regulations (CA of 1981) on accounting disclosure practices (chapter 8).
- The effect of language on accounting disclosure practices of Egyptian listed companies (chapter 8).

10.3.4 The current disclosure practice of Egyptian listed companies

This section contains a summary of the results of testing hypotheses H1, H2 and H3, and an interpretation of the results by comparison with findings of previous research.

10.3.4.1 Increase in disclosure levels (empirical research question 1 and hypothesis 1)

The analysis of the annual reports of a matched pairs sample of Egyptian listed companies in 1991 and 1995 revealed a significant increase in the three total indices (CA, CML and

IASs), the four partial indices (pCML, pIASs, pCML_A and pIAS_{SNA}) and most of the nine sub-indices. From the results of the statistical tests it can be concluded that the level of disclosure in the annual reports of Egyptian listed companies increased significantly in 1995 compared with 1991.

The increase in the established regulation (CA index) and the sub-indices 1 and 3 may be explained as a response from companies to the new economic policy of privatisation and increased interest in external disclosure as a reaction to the increased activities in the Stock Exchange and the increase in the ownership base. However, the increases in the new regulations indices (CML and IASs) and their sub-indices 6,8 and 9 may be seen as a reaction to mandating the new regulations.

On the other hand, there was no significant increase in the income statement items required by both the established and new regulations (sub-index 2). This may be because the disclosure requirements were already required since 1981 and the disclosure indices were high in 1991. Companies in 1991 paid more attention to the income statement than to the balance sheet because the net profit and dividends were the primary target of attention (Elsadik, 1990). Consequently, there was less scope for increase in the disclosure indices in 1995.

There was also no significant change in the additional items to be disclosed in the Board of Directors report as required by the CA + CML (sub-index 7), as the requirements were already required since 1981. In addition, there are only 4 items in sublist 7 and one of these items is the market value of land which, as explained in section 7.5.1.2, is rarely disclosed. However, the worst companies improved their board of directors' report greatly in 1995 (average increase 17%).

The change in sub-index 4 (additional balance sheet items required by the new regulations: CML and the IASs) was not significant in both Wilcoxon and t tests at .05 but significant at .10. This list is relatively short but includes the market value of investments which is rarely disclosed, as explained in section 7.5.1.1.

Disclosure items which had increased by 10% or more were used to explain the significant changes in the indices and sub-indices. These items showed that disclosure related to the CA had improved most significantly in matters of fixed assets, while the significant increase in sub-index 6 was explained by the improvement in notes to the accounts and accounting policy disclosures required by the CML and IASs. The significant improvement in the notes supported the expectations, formed in section 2.3.5, that subdividing the disclosure indices will give more insights and explanations of the disclosure practices.

The difference in the timeliness of the 1991 and 1995 annual reports of the sampled companies was tested using both Wilcoxon matched pairs test and t test. Although the decline observed in the reporting period is only 0.9 months on average, it can be suggested that the new economic policy changes and increasing interest shown towards external disclosure as a reaction to increased Stock Exchange activities probably had some effect on the reporting behaviour of Egyptian listed companies. Both tests were significant at .05, showing that reporting time in 1995 was significantly shorter compared with 1991.

The analysis also revealed a better level of compliance with mandatory requirements by Egyptian listed companies (CML, 84% and IASs, 85% 1995) compared with companies in other developing countries as shown in previous studies, e.g. Tanzania (53%) (Abayo et al., 1993). In Hong Kong (Tai et al., 1990) the average compliance rate was 78% for mandatory items in 1986/7 annual reports. In Bangladesh, for only 4 companies were the

mandatory disclosure indices were more than 90%, but for 37 companies the average index was between 60 % and 80 %.

The increase in disclosure as a reaction to new regulations adds information about Egypt to what has been shown in other developing countries studies: Jordan (Khasharmeh, 1995), Bangladesh, (Nicholls and Ahmed, 1995) and Saudi Arabia, (El-Modahki, 1995).

Overall the comparison produced the results which were expected. It is anticipated that the disclosure will improve in subsequent years when the Capital Market Authority (CMA) improves its supervisory role.

10.3.4.2 Various disclosure levels of different regulations (Research question 2 and Hypothesis 2)

Chapter 8 has reported tests of comparisons of the established regulations (CA) with each of the new regulations (CML and the IASs) and also comparisons of the partial CML (Arabic) with the partial IASs (not Arabic). The comparison of the CA with each of the CML and the IASs allowed testing the effect of familiarity on disclosure. The comparison of the two partial indices was designed to allow evaluation of the effect of language on disclosure.

The analysis of the annual reports of Egyptian listed companies revealed a higher level of compliance with the CA disclosure requirements than with the CML or with the IASs. This can be explained in the context that the CML and the IASs were relatively new regulations at the date of this study, in contrast with the CA which had existed since 1981. The analysis also revealed that there was a higher level of compliance with those aspects of the CML regulations which were appended in an Arabic translation ('partial CML Arabic'), as compared with the additional requirements of the IASs which were not

available in an official Arabic translation.. This supports the idea that there is a problem with a 'language barrier'. In particular, a language barrier may exist in the following respects:

- Lack of availability of an official Arabic translation.
- Lack of access to an official Arabic translation.
- Lack of availability of technical support.

The results provided evidence that both familiarity and language of the regulations have affected disclosure practices. These issues are likely to affect other countries which are in the same situation. The issue has policy implications for the Capital Market Authority which are discussed further in section 10.4.3.

10.3.4.3 Relationship between company characteristics and disclosure indices (Hypothesis 3)

The relationship between the disclosure indices and nine company characteristics was investigated in chapter 8 using univariate analysis and in chapter 9 using multivariate analysis. Univariate analysis (chapter 8) revealed that company size, expressed either in terms of sales or of assets, was the continuous variable most highly correlated with the disclosure indices. It also revealed that being a public sector company and having shares traded in the stock exchange were factors which had a higher mean rank of each total index (CA, CML, IASs) than private sector companies or those whose shares were not traded. The mean ranks of public sector and companies with shares traded in the Stock Exchange were also higher for most of the sub-indices than private sector and companies with rarely traded shares and the exceptions have been discussed in the relevant sections. The mean rank of the IASs indices for companies audited by one of the 'big six' audit

firms was significantly higher than the mean rank of indices for companies audited by other firms.

These findings were confirmed and refined by an extensive multivariate analysis applied to the total, partial and sub-indices, using ranked regression and regression based on normal scores (chapter 9). For each of the 13 calculated indices, six models were produced. The 'best fit' model was chosen on the basis of the highest $_{adj}R^2$ and the lowest mean square error (MSE).

The detailed analysis contained in chapter 9 for the total indices, partial indices and sub-indices contributed to forming a strong conclusion about each section of the annual report, as explained in the relevant sections of that chapter.

From the multivariate analysis it appeared that there were three company characteristics which were strong in explaining disclosure practices of Egyptian listed companies. These are:

- being a public sector company, which are the largest in size.
- having shares traded in the Stock Exchange
- being audited by one of the 'big six' audit firms.

10.4 Theory applicability

The applicability of theory may be considered in relation to :

- whether the increase in indices over time is related to established regulations or new regulations.
- the effect of familiarity with the regulations and the language of the regulations together with the issue of costs of compliance and costs of non-compliance.
- the interpretation of company characteristics which were found to be significant in the empirical results.

The analysis of matched pairs of annual reports of 1991 and 1995 has shown a significant increase in the indices of both established and new regulations.

The increase in disclosure of the requirements of established regulations implies some applications of agency and capital needs theories. This increase can be considered to be a reaction to the change in the economic policies. As explained earlier, the start of the privatisation programme in Egypt implies an increase in the ownership base. Companies increased their disclosure in order to reduce agency costs and to be able to collect capital at a reduced cost.

The increase in disclosure of the requirements of the new regulations supports the theory which justifies regulation in emerging capital markets (see section 2.2.4). It also supports the theory which argues that accounting regulation is one of the important factors causing improvement in disclosure.

The analysis of the 1995 annual reports of 72 Egyptian listed companies (chapter 8) provided evidence that familiarity and language have an effect on disclosure which might be similar to the results of previous research. Tai et al. (1990) found that lack of compliance may be a result of difficulties in interpreting the disclosure requirements and lack of resources to keep abreast of the changes in disclosure requirements. This also is related to the issue of compliance costs compared with non-compliance costs as discussed in section 2.2.5. From these results it can be concluded that common disclosure theories (e.g. agency theory, capital need theory) are too simplistic as they do not cover many other factors which might affect disclosure, such as language and familiarity and the capacity of the company in terms of compliance costs.

The disclosure indices of the 1995 annual reports of the 72 Egyptian listed companies were tested for any association with company characteristics. The theoretical explanation

of the company characteristics which were found to be significantly related to disclosure indices of Egyptian listed companies are as follows:

- Being a public sector company reflected two other factors; largest in size and intending to offer shares in the near future as a part of the privatisation programme. This is consistent with both capital need theory (intending to issue securities in the near future), agency theory (they are the largest in size) and political costs (they are in the public eye of the government). As part of the privatisation programme at that time these public companies were planning to issue shares in the near future. It has been shown in previous research (see Lang and Lundholm, 1993 and Morris, 1987 for more detail) that companies which plan to issue shares in the near future show an improvement in disclosure in the period before the date of issue. It is important to note that public companies are the largest listed companies, measured by sales and assets. These three company characteristics were highly correlated and so size is also a strong explanatory variable for disclosure practice in Egypt. It is consistent with previous research to find that size is a characteristic which is strongly associated with disclosure (see chapter 2 for more detail).
- Having shares traded in the Stock Exchange is consistent with previous literature (see chapter 2) which has drawn on agency theory and capital need theory to show that companies which have a relatively large number of shareholders provide better disclosure in order to reduce the agency costs and to collect capital more easily. Share trading might also reflect corporate culture (closed companies disclose less) and the orientation of their managers.
- Being audited by one of the 'big six' audit firms is particularly important in relation to those aspects of disclosure which are regulated by the International Accounting

Standards but for which there is no official Arabic translation available in Egypt. This proved that familiarity and language of regulations can affect disclosure. These factors are not covered by any of the disclosure theories discussed in the literature review.

The overall conclusion is that theories such as agency theory, capital need theory and signalling theory are too simplistic and do not cover all factors which can affect disclosure in developing countries or emerging capital markets.

10.5 Implications of the research findings

The research findings can be generalised to countries with similar situations.

10.5.1 Implications for future research into IASs disclosure measurement

The factors of familiarity and language which have been highlighted in this research are likely to arise in other countries. The accountancy professions in a large number of countries have been affected by the Anglo-American practice (Briston, 1978) in one way or another, either through British Colonial influences or major British or American multinationals which adopted the accounting system of their home country, exchange of staff, education programs and scholarships to study in the UK or America. In the meantime the IASs are largely influenced by the Anglo-American standards (Hove, 1990). This means that there is a possibility that accounting regulations and practice in many countries already include a number of the provisions of the IASs. The same situation was found to be applicable in Egypt as many of the disclosure requirements of the IASs were already required by the Egyptian Companies Act since 1981. Also, when the IASs are mandated or recommended in a country sometimes the local regulatory body issues a translation of all or part of the IASs. This also happened in Egypt where some

parts of the disclosure requirements of the IASs were translated and appended to the new Capital Market Law.

The IASs are mainly issued in English (up to 1998, only three translations, namely French, German and Russian, have been carried out officially by the IASC). This study has highlighted the importance of testing the effects of a 'language barrier' on the application of the IASs in disclosure studies. If there is a situation where part of the disclosure requirements of the IASs is not available in the local language, a language barrier may arise in that country which is likely to affect disclosure practices. This situation is likely to be in many non-English speaking developing countries, where a reliable translation and technical support may not be available.

This research has shown that the level of IASs disclosure will vary and therefore subdividing the disclosure indices according to the following is beneficial:

- whether the item is already included in the established local regulations or not;
- whether the item is included in recent regulations in the native language or not.

The subdivision suggested in this research has allowed testing the effects of a 'language barrier' and better analysis and richer interpretations of results as explained in detail in the following section. This new technique can be followed in future research.

Additionally, there may be other countries which, like Egypt, give more attention to the income statement than to other parts of the annual report. Therefore it is important to segment the IASs disclosure requirements according to the part of the annual report which they represent.

This segmentation could also be applied in studies of other countries where there is a similar pattern of changing local laws as well as the introduction of IASs. Linking the

main hypotheses to the subdivisions of the disclosure list allows testing of specific groups of disclosure items and extraction of specific conclusions and testing the applicability of specific disclosure theories.

10.5.2 Implications for theory

From a review of previous disclosure studies on developing countries and the in-depth analysis of disclosure practices in Egypt it can be concluded that agency and capital needs theories are applicable to Egypt but not as strongly as in developed countries. Signalling theory has not proved to be applicable to Egypt. This might be because of the lack of transparency in order that signalling can be effective.

On the other hand, it can be said that these theories are too simplistic as they do not cover issues such as corporate culture, managers' attitudes, different legal forms of business, familiarity and language. These factors have been highlighted in this research and have been supported by the empirical evidence.

The implication is that future research should have an open mind in considering the existing disclosure theories but should also look for new theoretical explanations relevant to the country or area being studied.

10.5.3 Implications for policy makers

There are implications of the research findings for the IASC, the Capital Markets Authority and the Egyptian Standard Setting Board.

10.5.3.1 International Accounting Standards Committee

Since a large number of developing countries have accepted the IASs for application in practice, these countries should have a better representation on the IASC Board. The needs of these countries are important and it is urgent that they are taken into consideration in the near future, regarding both the relevance of the contents of the standards and the technicalities of their application in different countries. In addition the increase of the number in developing countries in the IASC board is needed so that more interest will be expressed in their special needs.

The IASC is required to give more attention to the 'language barrier' highlighted in this research. Also, a translation into the Arabic language will be of interest for the 22 Arab countries which are members of the Arab society of Accountants and Auditors (ASAA). The ASAA has adopted the IASs in a declaration in Dubai 1998 (as cited in the IASC's web-site, 1997).

10.5.3.2 Capital Market Authority (CMA)

Egypt, in its new era of privatisation and a growing Stock Exchange, has not reached the best possible administrative situation so far as the Capital Market is concerned. Therefore a number of policy recommendations to the CMA may be drawn from this study:

The CMA and other regulatory bodies should combine the different overlapping regulations. Companies have been preparing different sets of accounts according to different laws. It is important to note that a unified Companies Act was proposed several years ago. However, up to the date of writing this thesis there is no public indication of progress in this matter.

The CMA should strongly exercise its right to receive the annual reports of listed companies. Also, copies of the full annual reports of the listed companies should be easily available for public use either through a fee or in the CMA library. As at March 1997, only the computer printout of a brief copy of the financial statements was available from the CMA. The full copy of companies was available in its archive but some of the reports were missing and some were incomplete.

The CMA should arrange for a reliable translation of the IASs. The IASC's publications should be publicly available in an Arabic translation for listed companies with follow-up technical support and training sessions. Also it is important to highlight educating practitioners about the importance of the disclosure of the current value of land and the current value of investments if there is a great difference between current value and book value as required by the regulations.

A better list for the IASs disclosure requirements combined with the national regulations should be prepared. The list which was in use by the CMA up to 1997 included only the financial statements items which are appended to the CML; this did not include all the IASs and national regulations requirements.

The CMA should take stronger steps to delist closed companies which are rarely traded (listed for tax exemption) as stated by the CML. Once a smaller number of listed companies remains, the CMA will be able to make better use of its resources in filing and controlling company documents and this will improve the reputation of the market. Also, the tax exemptions offered to rarely traded companies should be given by some mechanism other than a requirement for listing.

10.5.3.3 *Egyptian Standard Setting Board*

It has to be taken into consideration that the EASs are out of date as the IASs which were the basis for these standards have been changed since the EASs were written.

The IASs should be considered in the context that they are highly affected by the Anglo-American approach which in some cases may not be relevant to Egypt; for example unlisted public sector companies which do not intend to be privatised.

Priority has to be given to some standards more than others, as all the IASs may not be urgent to Egypt. The empirical work in this research has shown that there were several IASs which were not applicable to the situation of Egypt.

10.6 Contribution of this research

In meeting the research objectives, the research makes the following particular contributions.

10.6.1 Contribution to the literature of accounting in developing countries especially in terms of applicability of disclosure theories and enhancing the understanding of the IASs in relation to Egypt (General objective 1)

The results of the study have provided evidence on the applicability of disclosure theories to a developing country such as Egypt (see section 10.4).

The work has provided evidence of how the IASs have been adopted by the regulations and standards of Egypt, as an example of a developing country. This supports calls for the IASC to give more attention to the needs of developing countries.

The results of this study offer a better understanding of accounting disclosure practices in Egypt, as a developing country. This leads to guidance on appropriate approaches to improving accounting disclosure in Egypt. Several practical outcomes have emerged from the study, which provides a more detailed understanding not only of accounting disclosure in Egypt but also of the factors that affect it.

10.6.2 Measuring accounting disclosure (General objective 2)

In relation to the literature of measuring accounting disclosure, the contribution is the construction of an IASs disclosure index, which is suitable to the Egyptian situation, by considering the following three dimensions simultaneously:

- (1) whether the disclosure item is required by one or more established regulations;
- (2) whether the disclosure item is available in the native language or not;
- (3) the part of the annual report in which the item is located.

This has resulted in constructing a disclosure list segmented into 9 sub-lists. This segmentation technique can be used in studies of disclosure in other countries.

The analysis carried out in this work is more extensive than has been carried out previously. This is seen in the disclosure indices, partial indices and sub-indices, amounting to 15 in total, simultaneously calculated from each annual report

Extensive statistical analysis has been applied to each of the disclosure indices, leading to richer interpretation of results and allowing strong and specific conclusions to be drawn on matters of detail in disclosure practice.

10.6.3 Effects of the new regulations (Specific objective 1)

In-depth analysis of accounting disclosure practices in 1991 and 1995 (before and after the new CML was issued and the IASs were mandated) has provided strong evidence of improvement as a result of the new regulations. This provided evidence that regulating disclosure is more relevant to emerging capital markets.

10.6.4 Requirements of various regulations (Specific objective 2)

Calculating separate indices for the CA, CML and IASs has shown the higher compliance with the established regulations (CA) compared with the new regulations (CML and IASs). This provided evidence that familiarity and language affect disclosure practices in emerging markets.

Calculating two partial indices (partial CML Arabic and partial IASs not Arabic) has allowed the testing of a language barrier effect on disclosure. This is a new factor which has not been tested before in disclosure studies.

10.6.5 Company characteristics and extent of disclosure (Specific objective 3)

Extensive testing of relationships using both univariate and multivariate analysis, has shown that legal form, size and share trading are factors which are strongly associated with the highest levels of disclosure. Theoretical interpretations have been provided.

The multivariate analysis has been carried out using three different combinations of company characteristics (to avoid Collinearity) and using regression procedures based on ranked and normal scores. This has produced 6 regression models for each index from which the best model has been chosen. This has allowed strong conclusion to be drawn

about which company characteristics govern the accounting disclosure practices of Egyptian listed companies.

10.7 Strengths and limitations of the study

In this section, the strengths and limitations of this research are outlined in sections 10.6.1 and 10.6.2 respectively, in order to put the findings and implications already detailed into context.

10.7.1 Strengths

The strengths of this study lie in the depth of the data analysis undertaken. This is seen in the large number of total indices, partial indices and sub-indices calculated from each annual report. It is also seen in the insights gained for understanding disclosure measurement by the comprehensive coverage of the overlap between IASs and national regulations on disclosure measurements, the development of a relevant disclosure list and the development of a new segmentation technique which considers the overlap between different regulations and the effects of familiarity with regulations and the language of the regulations.

This study builds on the existing body of disclosure literature in which the disclosure index technique used in previous research has been developed and brought to a stage where its relevance to the measurement of disclosure related to IASs in different countries can be improved by understanding the special environment of each country. The study has highlighted the different interpretations which can be drawn in the case of non-compliance.

A large number of disclosure indices (13-15 indices) has been calculated for each company and then subjected to an extensive exploratory and statistical analysis; matched

pairs have been used to report the change in disclosure. Methods of univariate and multivariate analysis have been used to investigate the relationship between disclosure and company characteristics. This extensive analysis has allowed comprehensive and specific conclusions to be drawn. In addition, explanation of results in terms of theory has been presented.

This is the first study to test the effects of language and familiarity on the application of IASs in developing countries generally and Egypt specifically.

The study has also developed multivariate regression models for each total index, partial and sub-index which allowed drawing conclusions on which company characteristics affect each group of disclosure items. For each index six models were developed from which the best model was chosen based on the highest $_{adj}R^2$ and the lowest mean square error. This analysis was more extensive than that found in previous research.

10.7.2 Limitations

The key findings and conclusions of this study must be interpreted in light of the limitations of the study which are noted in section 1.7 and are discussed further in this section.

The reported changes in disclosure were drawn from the analysis of the matched pairs of the annual reports of only 20 listed companies as the analysis was restricted by the availability of data. Of these, 17 companies were actively traded. This may mean that the conclusion about the significant increase in the levels of disclosure of Egyptian listed companies is based mainly on actively traded companies. However this does not minimise the importance of the results, as the actively traded companies are the most important sector in the Egyptian Stock Exchange. The rarely traded companies were

included not for their significance but rather for observation and for drawing specific recommendations.

The date of December 1995 is the earliest point at which the effect of the new CML on annual reports could be tested, because October 1995 was the deadline for implementation of the CML. It might be expected that there would have been further improvement in disclosure in subsequent years.

The study of corporate characteristics associated with disclosures scores in chapters 8 and 9 is based on 72 companies which were not a totally random sample because of the problems of data collection, as explained in chapter 6. However, they were well spread across the stock exchange listing and the analysis of characteristics in chapter 8 indicates a wide range.

The explanations and conclusions drawn were based on the analysis of the annual reports. A better explanation of disclosure practice may be improved and supported by information available from phone calls, interviews and questionnaires. This type of follow-up data was not undertaken in this study because the primary aim of the study was to evaluate the level of disclosure offered by Egyptian listed companies in their annual reports, which was the approach taken in a large number of previous disclosure studies.

10.8 Suggestions for future research

This section notes further research for which this study provides a basis. The following are suggestions for future research:

- This study represents the situation in 1995. It would be interesting to replicate the study in the future to see whether a few years later the capital market has had a greater impact on disclosure.
- This study has concentrated on Egypt. It would be very interesting if the study were replicated in other Arab countries so that comparisons could be drawn.
- Assessing the level of compliance with audit report requirements as stated in the Egyptian and international guidelines will be covered in future research.
- Survey of the accounting measurement practices of Egyptian listed companies (through a questionnaire) with a comparison to the IASs will be covered in future research.
- Survey of the disclosure requirements of different categories of Egyptian users (through a questionnaire) with a comparison with the IASs will be covered in future research.
- Survey of international accounting education in Egypt and routes for improvement will be covered in future research.

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Appendix A: Full Disclosure List

Balance Sheet Disclosure List of Items Required by the IASs +CML+ CA
Sublist 1
<i>Property, Plant & Equipment:</i>
1) Classification of Land & Buildings separate from Plant and Equipment separate from other categories
2) Gross & Net Cost of Each Category
3) Accumulated Depreciation
<i>Projects in Progress</i>
4) Total projects in progress
5) Classification of projects in progress
<i>Long Term Investments:</i>
6) Investments in Subsidiaries
7) Investments in Associates
8) Other Investments
<i>Long Term Lending:</i>
9) Long Term Lending to Holding Companies
10) Long Term Lending to Subsidiaries
11) Long Term Lending to Associated Companies
12) Long Term Lending to Others
13) The Amount Due in a Year's Time
<i>Long Term Receivables:</i>
14) Accounts and Notes Receivables-Trade
15) Intercompany Receivables
16) Receivables from Associates
17) Other
<i>Other Long-Term assets:</i>
<i>The following should be disclosed separately:</i>
18) Goodwill
19) Patents, Trademarks and Similar Assets
Expenditures Carried Forward, for example:
20) Preliminary Expenses
21) Reorganisation Expenses
22) Deferred Taxes
23) Other

Current Assets:
<i>Inventories:</i>
24) Suitable Sub-Classifications
25) Total Carrying Amount
26) Carrying Amount of Each Classification Group
<i>Debtors and Bills Receivables:</i>
27) Accounts and Notes Receivables-Trade
28) Intercompany Receivables
29) Receivables from Associates
30) Other Receivables and Prepaid Expenses
31) The Provision of Doubtful Debts
<i>32) Cash on Hand and at Bank</i>
Long Term Liabilities:
The Following Should be Disclosed Separately, Net of the Portion Payable Within One Year Which Should be Disclosed in the Current Liabilities
<i>Loans:</i>
33) Long - Term Loans
34) Intercompany Loans
35) Loans from Associates
36) Bonds
Current Liabilities:
The Following Items Should Be Disclosed Separately:
<i>37) Short Term Bank Loans and Overdrafts</i>
<i>38) Current Portions of Long Term Liabilities</i>
<i>Payables:</i>
39) Accounts and Notes Payable-Trade
40) Intercompany Payables
41) Payables to Associates
42) Taxes Payable
43) Dividends Payable
44) Other Payables and Accrued Expenses
<i>Other Liabilities and Provisions:</i>
45) Total provisions
46) Details of Provisions

Shareholders' Interests:
<i>The Following Disclosure Should be made separately:</i>
<i>a) Share Capital :</i>
For Each Class of Share Capital
47) The number or Amount of Shares Authorised, Issued and Outstanding
48) The Capital not Yet paid in
49) The Par or Legal Value Per Share
50) The Movement in Share Capital Accounts During The Period
<i>b) Other Equity, Indicating the Movement for The Period and any Restrictions on Distribution:</i>
51) Retained Earnings
Reserves in Detail:
52) Total Reserves
53) Details of Reserves
Total Sub-index 1

<u>Income Statement Disclosure List of Items Required by the IASs +CML+ CA</u>
<u>Sublist 2</u>
1) Sales and Operating Revenues
2) Significant Intercompany Transactions
3) Revenue From Associates
4) Interest Income
5) Income from Other Investments, for Example:
a) Royalties
b) Dividends
c) Rental on Long-Term and Current Investments
6) Cost of Operating Revenues Recognised as an Expense During the Period
7) Details of Operating expenses
8) Capital Gains or Losses of Disposal of Fixed Assets or Investments
9) Previous years expenses or revenues
10) Taxes on Income
11) Transfers to Capital Reserves
12) Differences from Foreign Currency Translation / Exchange
13) Net Profit for the Period
Total Sub-index 2

<u>General Information Disclosure List of Items Required by the IASs +CML+ CA</u>
<u>Sublist 3</u>
1) Name, Legal Form of Enterprise and Country of Incorporation
2) Nature of Activities of the Company + Subsidiaries
3) Currency of the Financial Statements
4) Corresponding Figures of the Preceding Year
5) Period Covered by the Financial Statements
6) A Statement of Shares or Debentures Issued During the Year
7) A Breakdown of Net Profit or Losses According to the Company's Main Activities
8) Changes of the Ownership of the Subsidiaries During the Year
9) Additions or Disposals of the Company's Fixed Assets:
10) Main Changes to the Subsidiary's Fixed Assets
Total Sub-index 3

Balance Sheet Additional Items Required by the IASs + the CML
Sublist 4
<i>Long Term Assets:</i>
1) Assets Acquired on Instalment Purchase Plan
2) Land held for development and related development cost
3) The Market Value of Listed Investment in Subsidiaries if Different from the Carrying Amount in the Financial Statements
4) The Market Value of Listed Investment in Associates if Different from the Carrying Amount in the Financial Statements
5) Receivables from Directors (long Term)
<i>Current Assets:</i>
6) Receivables from Directors (Short Term)
<u>Marketable Securities(Current Investment in Securities Other Than Long Term)</u>
7) Cost of Marketable Securities
8) Market Value of Marketable Securities if Different from the Carrying Amount in the Financial Statements
9) Provision for these Securities
<u>Cash on Hand and at Bank</u>
10) Cash on Hand and bank current accounts
11) Long Term Deposits
12)Cash Which is not Available for Use, Like Balances Frozen in Foreign Banks by Exchange Restrictions
<i>Shareholders'Interests:</i>
<u>a) Share Capital:</u>
13) Number of Shares Held in Treasury
14) The Rights, Preferences and Restrictions with Respect to the distribution of dividends and to the Repayment of Capital
15) Cumulative Preference Dividends in Arrears
16) Reaquired Shares
17) Shares Reserved for Future Issuance under Options and Sales Contracts Including the Terms and Amounts
<u>b)Other Equity, Indicating the Movement for the Period and any Restrictions on Distribution:</u>
18) Capital Paid in Excess of Par Value (Share Premium)
19) Revaluation Surplus
<i>Current Liabilities:</i>
20) Payables to directors
Total Sub-index 4

Income Statement Additional Items Required by the IASs + the CML
Sublist 5
1) Extraordinary Charges
2) Extraordinary Credits
3) Nature & Amount of Each Extraordinary Item Other than those Mentioned Earlier.
4) Changes in Value of Investments such as: <ul style="list-style-type: none"> a) Unrealised Gains and Losses on Current Investments Carried at Market Value, Where such a policy has been Adopted Under IAS25 b) Reductions in Market Value and Reversals of Such Reductions Needed to Carry Current Investments at Lower of Cost and Market Value
5) Tax Expense Related to Income from the Ordinary Activities Separated from Tax Expense Relating to Extraordinary Items, to Fundamental Errors and to Changes in Accounting Policies
Total Sub-index 5

Additional Disclosure Items in the Notes Including Accounting Policies Required by the IASs + the CML
Sublist 6
IAS 2: Inventories:
1) Accounting Policies Adopted in Measuring Inventories
2) Cost Formula Used
3) The Carrying Amount of Inventories Carried at Net Realisable Value
4) The Amount of any Reversal of any Write-down that is Recognised as an Income
5) The circumstances or Events that led to the Reversal of a writedown of inventories
6) Carrying Amount of Inventories Pledged as Security
7) If LIFO used, The Difference Between the Amount of Inventory in the Balance Sheet and Either: <ul style="list-style-type: none"> a) The Lower of the Inventory Valued According to FIFO or Weighted Average and Net Realisable Value b) The Lower of Current Cost at the Balance Sheet Date and Net Realisable Value
IAS4: Depreciation:
For Each Major Group of Fixed Assets, The Following Should Be Disclosed:
8) The Valuation Basis of Each Fixed asset (if Different from Cost, Because it is Required by the CA to Use the Cost as a Measurement Basis for All Balance Sheet Items)

9)a) Depreciation Method b) The Quantified Effect of any Change in it and reasons for Change
10) a) Useful Life or Depreciation Rate b) The Quantified Effect of any Change in it and reasons for Change
IAS 8: Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies:
Discontinued Operations:
11) Nature of the Discontinued Operation
12) The Industry and Geographical Segments in Which it is Reported in Accordance With IAS 14
13) The Effective Date of Discontinuance for Accounting Purposes
14) The Manner of Discontinuance (i.e., by Sale or Abandonment)
15) Gain or Loss on Discontinuance
16) Accounting Policy Used to Measure that Gain or Loss
17) The Revenue and Profit or Loss from the Ordinary Activities of the Operation for the Period, Together with the Corresponding Amounts for each Prior Period Presented
Changes in Accounting Estimates:
18) Nature of Changes in Accounting Estimates
19) Amount of Significant Changes in Accounting Estimates(if Quantifiable), and If It Is Not Practicable to Quantify the Amount, this Fact Should be Disclosed
Fundamental Errors:
If Benchmark Treatment is Elected:
20) Nature and Amount of the Correction for the Current Period & for each Prior Period
21) Amount of the Correction Which Relates to Periods Prior to those Included in the Comparative Information
22) (a) If Comparative Information has been Restated, this Fact Should be Made Explicit (b) If Comparative Information is Not Restated Because it is Not Practicable to do so, This Fact Should be Disclosed
If Allowed Alternative Treatment is Elected:
20) Nature and Amount of the Correction of the Fundamental Error Which is Reorganised in the Net Profit or Loss for the Current Period
21) Amount of the Correction of the Fundamental Error Which is Included in Each Period for Which "Proforma" Information is Presented
22) (a) The Amount of Correction Relating to Periods Prior to Those Included in the "Pro forma" Information (b) If Presenting a "Pro forma" Information is not Practicable, This Fact Should be Disclosed

Changes in Accounting Policies:
If the Benchmark Treatment was Followed the Following should be Disclosed:
23) Reasons for Change in Accounting Policies
24) Amount of Adjustment for Current Period & Each Prior Period
25) The Amount of the Adjustment Relating to Periods Prior to Those Included in the Comparative Information
26) If Comparative Information Has Been Restated, The Fact of Change and Restating Comparative Information Should be Disclosed(if Practicable), or Disclosing the Fact of Being Impractical to Restate Them
If Allowed Alternative Treatment is Elected:
23) Reasons for Change in Accounting Policies
24) Amount of Adjustment Recognised in the Net Profit or Loss for the Current Period
25) The Amount of the Adjustments Included in Each Period for Which “Pro forma” Information is Presented and the Amount of Adjustment Related to Periods Prior to Those Included in the Financial Statements, and
26) If It is Not Practicable to Present “Pro forma” Information, This Fact Should be Disclosed
IAS 9: Research and Development Costs:
27) Accounting Policies Adopted for Research and Development Costs
28) Amount of Research and Development Costs Recognised as an Expense in the Period
29) Amortisation Methods Used
30) Useful Lives or Amortisation Rates Used
31) Reconciliation of the Balance of Unamortised Development Costs at the Beginning and end of the Period Showing Development Costs Recognised as an Asset or as an Expense or Allocated to Other Assets or Written Back
IAS 10 : Contingencies and Events Occurring after the Balance Sheet Date
Contingencies:
32) When the Amount of a Contingent Loss Cannot be Recognised as an Expense and a Liability Because Probable Loss Could not Be Estimated, the Existence of a Contingent Loss Should be Disclosed in the Financial Statements, Unless the Possibility of Loss is Remote.
33) The Existence of Contingent Gains should be Disclosed if it is Probable that the Gain will be Realised. It is Important, However, that the Disclosure Should Avoid Giving Misleading Implications as to the Likelihood of Realisation..
When Disclosure of Contingencies is Made as Required (i.e., When Conditions Outlined Above Are Met) the Following Information is to be Disclosed
34) Nature of the Contingency and Uncertain Factors which may Affect Future Outcomes

35) Estimate of the Financial Effect (if Applicable or a Statement that such an Estimate Cannot be Made)
Events Occurring After the Balance Sheet Date:
36) Subsequent Events that Provide Additional Evidence Regarding Conditions Existing at Balance Sheet Date Require Adjustment of Financial Statements
37) Those Subsequent Events Which do not Affect the Condition of Assets or Liabilities at the Balance Sheet Date but are of such Importance that Omission to Disclose them Would Affect the Ability of the users of Financial Statement to Make Proper Decisions, should be Disclosed.
<i>When Subsequent Events are Disclosed, the Following Information Should be Provided:</i>
38) Nature of the Event
39) An Estimate of the Financial Effect or a Statement that such an estimate cannot be Made
40) Dividends Proposed or Declared After the Balance Sheet Date but Before Approval of the Financial Statements Should Either be Adjusted for or Disclosed
<i>IAS 11: Construction Contracts:</i>
41) Methods Used to Determine Contract Revenue Recognised in the Period
42) Methods Used to Determine Stage of Completion for Contract in Progress
Concerning Contracts in Progress:
43) Aggregate Amount of Costs Incurred and Recognised Profits/Losses to Date
44) Amount of Advances Received, The Gross Amount due from/to Customers for Contract Work as an Asset / Liability
45) Amount of Retention
46) a) The Gross Amount Due From Customers for Contract Work as an Asset b) The Gross Amount Due to Customers for Contract Work as a Liability
<i>IAS 12: Accounting for Taxes on Income:</i>
47) Tax Effects, if any, Related to Assets that have been Revalued to Amounts in Excess of Historical Cost or Previous Revaluation
48) An Explanation of the Relationship between Tax Expense and Accounting Income if not Explained by the Tax Rates Effective in the Country of the Reporting Enterprise
Concerning Tax Losses:
49) Amount of Tax Saving Included in Net Income in the Period of the Loss
50) Amount of Tax Saving Included in Net Income for the Current Period as a Result of the Realisation of a Tax Loss Carry forward that had not been Accounted for in the Year of the Loss
51) Amount and Future Availability of Tax Losses for which the Related Tax Effects have not been Included in the Net Income of any Period
<i>IAS 16: Property, Plant and Equipment:</i>

For Each Class of Property, Plant and Equipment:
A Reconciliation of the Carrying Amount at the Beginning and End of the Period Showing:
52) Acquisitions Through Business Combinations
53) Increases or Decreases Resulting from Revaluation
54) Reductions in Carrying Amounts
55) Amounts Written Back
56) The Net Exchange Differences Arising on the Translation of the Financial Statements of a Foreign Entity
The Following, Also, Should be Disclosed:
57) Whether, in Determining the "Recoverable Amount" of the Items of Property, Plant and Equipment, Expected Future Cash Flows have been Discounted to their Present Values
58) The Existence and Amounts of Restrictions on Title, and Property, Plant and Equipment Pledged as Security for Liabilities
59) The Accounting Policy for Restoration Costs Relating to Items of Property, Plant and Equipment
60) The Amount of Outstanding Commitments for the Acquisition of Property, Plant and Equipment
When Items of Property, Plant and Equipment are Stated at Revalued Amounts, the Following should be Disclosed:
61) The Basis used to Revalue the Assets
62) The Effective Date of the Revaluation
63) Whether an Independent Valuer was Involved
64) The Nature of any Indices used to Determine Replacement Cost
65) The Carrying Amount of Each Class of Property, Plant and Equipment that would have been Carried at Cost Less Accumulated Depreciation
66) The Revaluation Surplus, Indicating the Movements for the Period and any Restrictions on the Distribution of the Balance to Shareholders
IAS 18: Revenue
67) The Accounting Policies Adopted for the Recognition of Revenue including the methods Adopted to Determine the Stage of Completion of Transactions Involving the Rendering of Services
68) The Amount of Revenue Arising from Exchanges of Goods or Services included in each Significant Category of Revenue
IAS 21: The Effect of Changes in Foreign Exchange Rates:
69) Accounting Policy for changes in foreign exchange rate
70) Net Exchange Differences Classified as a separate component of equity and a Reconciliation of the Amount of such Exchange Differences at the Beginning and End of the Period

71) The Amount of Exchange Differences Arising During the Period Which is Included in the Carrying Amount of an Asset According to IAS 21 Para 21 Under the Allowed Alternative Treatment
72) The Reasons for Using a Different Reporting Currency in the Financial Statements Different from the Country of Domicile and Reasons for any Change to that Reporting Currency
When there is a Change in the Classification of a significant Foreign Operation the Following Should be Disclosed:
73) The Nature of the Change in Classification
74) The Reason for the Change
75) The Impact of the Change in Classification on Shareholder's Equity
76) The Impact on Net Profit or Loss for Each Prior Period Presented as if the change in Classification had Occurred at the Beginning of the Earliest Period Presented
The Following Also Should be Disclosed:
77) The Method Selected to Translate Goodwill and Fair Value Adjustments to the Carrying Amounts of Assets and Liabilities Arising on the Acquisition of a Foreign Entity
78) A Change in Exchange Rates Occurring After the Balance Sheet Date Which is of Such an Importance that Nondisclosure Would Affect the Ability of Users of the Financial Statements to Make Proper Evaluations and Decisions should be Disclosed
79) Recommended Additional Disclosure: An Enterprise is Encouraged to Disclose its Foreign Currency Risk Management Policy
IAS 23: Borrowing Costs
80) The Accounting Policy Adopted for Borrowing Costs
81) The Amount of Borrowing Costs Capitalised During the Period
82) The Capitalisation Rate Used to Determine the Amount of Borrowing Costs Eligible for Capitalisation
83) Security Status of Long Term Loans
84) Summary of Interest Rates, Repayment Terms, Covenants, Subordinations, Conversion Features and Amounts of Unamortised Premium or Discount should be Disclosed
IAS 24: Related Party Disclosure:
If there have been Transactions Between Related Parties the following should be disclosed:
85) Related Party Relationships Where Control Exists should be Disclosed irrespective of Whether there have been Transactions Between the Related Parties
Where Transaction have Taken Place between Related Parties the Following should be Disclosed:
86) The Nature of the Related Party Relationship
87) The Types of Transactions

88) The Elements of the Transactions Necessary for Understanding the Financial Statements Including Volume of Transaction, Amounts of Outstanding Items, and Pricing Policies
89) Aggregation of Items of Similar Nature is Permitted, unless Separate Disclosure is Needed for an Understanding of the Effects of the Related Party Transactions on the Financial Statements of the Reporting Enterprise
IAS 25: Accounting for Investments:
The Accounting Policies For:
90) The Determination of Carrying Amounts of Investments
91) The Treatment of Changes in Market Value of Current Investments Carried at Market Value
92) The Treatment of a Revaluation Surplus on the Sale of a Revalued Investment..
The Significant Amounts Included in Income for:
93) Profits and Losses on Disposal of Current Investments
94) Changes in Value of such Investments
The following also should be Disclosed:
95) The Fair Value of Investment Properties if they are Accounted for as Long-Term Investments and Not Carried at Fair Value
96) Significant Restrictions on the Realisability of Investments or the Remittance of Income and Proceeds of Disposal
For Long-Term Investments Stated at Revalued Amounts:
97) The Policy for Frequency of Revaluations
98) The Date of the Latest Revaluation
99) The Basis of Revaluation and Whether an External Valuer was Involved
The Following also should be Disclosed:
100) The Changes for the Period in Revaluation Surplus and the Nature of such Changes
101) For Enterprises whose main Business is the Holding of Investments an Analysis of the Portfolio of Investments
IAS 28 : Accounting in Investments in Associates:
102) If the Equity Method Would be the Appropriate Accounting Method for the Associate if the Investor issued Consolidated Financial Statements, Using Cost or Revalued Amounts, the Investor should Disclose what have been the Effect had if the Equity Method been Applied
103) An Appropriate Listing and Description of Significant Associates Including the Proportion of Ownership Interest and, if Different, the Proportion of Voting Power Held
104) The Methods used to Account for Investment
Concerning Investments in Associates Accounted for Using the Equity Method:

105) The Investor's share of any Extraordinary or Prior Period Items Should also be Separately Disclosed

Total Sub-index 6

Additional Disclosure List of Items Required by Both the CA and CML Only

Sublist 7

Specific Items of the Board of Directors' Report:

1) Future Activities

2) The Current Value of Land (If There is a Great Difference Between the Market Value and the Book Value)

3) The Volume of Export

4) Donations

Total Sub-index 7

Additional Disclosure List of Items Required by CML Only

Sublist 8

Statement of Resources and Uses of Funds:

1) Capital Increase/Decrease

2) Company Share of Current Year Profit / losses

3) The Increase / decrease in Reserves

4) Depreciation of the Current Year

5) The Increase in Long Term Liabilities

6) Long Term Liabilities Payments

7) Retained Taxes on Current Year Profit

8) Paid Taxes

9) The Increase in Other Current Liabilities

10) Profit Distribution on Shareholders and Employees

11) The Increase / Decrease in Other Credit Accounts

12) The Decrease / Increase in Fixed Assets

13) The Decrease / Increase in Long Term Investments

14) The Decrease / Increase in Short Term Investments in Securities

15) The Decrease / Increase in Other Current Assets

16) The Decrease / Increase in Other Debit Accounts

Total Sub-index 8

Additional Disclosure List of Items Required by IASs Only
Sublist 9
Cash Flow Statement:
1) A Cash Flow Statement should be Presented as Integral Part of an Enterprise's Financial Statements for each Period for Which the Financial Statements are Presented
2) Reporting Cash Flows Classified by Operating, Investing and Financial Activities
3) Cash Flows From Operating Activities should be Reported Using Either the Direct Method or the Indirect Method
4) Reporting Major Classes of Gross Cash Receipts and Gross Cash Payments Arising from Investing and Financing Activities Separately Except the Cases Explained in the Following Item
5) Cash Flows Arising from the Following Operating , Investing or Financing Activities may be Reported on a Net Basis in the Following Cases: <ul style="list-style-type: none"> • Cash Receipts and Payments on Behalf of Customers • Cash Receipts and Payments for Items in Which the Turnover is Quick, the Amounts are Large and the Maturity are Short
6) Cash Flows Associated with Extraordinary Items should be Classified as Arising from Operating, Investing or Financing Activities as Appropriate and Separately Disclosed
7) Cash Flows from Interest and Dividends Received and Paid should each be Disclosed Separately. Each Should be Classified in a Consistent Manner from Period to Period as Either Operating, Investing Or Financing
8) The Effect of Exchange Rate Changes on Cash and Cash Equivalents Held or Due in Foreign Currency should be Presented Separately from Cash Flows from Operating, Investing and Financing Activities
9) Non cash Transactions Arising from Investing and Financing Activities should be Excluded from the Cash Flow Statement. Such Transactions do not Require the Use of Cash and Cash Equivalents and thus Should be Disclosed Elsewhere in the Financial Statements by Way of a Note that Provides all the Relevant Information About these Activities
10) Cash Flows Arising from Taxes on Income should be Separately Disclosed and should be Classified as Cash Flows from Operating Activities unless they can be Specifically Identified with Financing and Investing Activities
11) The Aggregate Cash Flow Arising From Acquisition and from Disposals of Subsidiaries or other Business Units should be Presented Separately and Classified as Investing Activities

<p>12) The Following also should be Disclosed:</p> <ul style="list-style-type: none"> • The Total Purchase or Disposal Consideration • The Portion of the Purchase or Disposal Consideration • The Amount of Cash and Cash Equivalents in the Subsidiary or Business Unit Acquired or Disposed of
<p>13) The Amount of Assets and Liabilities other than Cash or Cash Equivalents in the Subsidiaries or Business Unit Acquired or Disposed of, Summarised by each Major Category</p>
<p>14) Components of Cash and Cash Equivalents should be Disclosed and should Match the Amounts of Equivalent Items in the Balance Sheet</p>
<p>15) The Amounts of Significant Cash and Cash Equivalent Balances Held by the Enterprise which are not Available for Use by the Group should be Disclosed with a Management Commentary</p>
<p>Total Sub-index 9</p>

Appendix B Items fully disclosed in both periods

Sublist 1 Balance sheet items Required by the IASs +CML+ CA
1) Classification of Land & Buildings separate from Plant and Equipment separate from other categories
4) Total projects in progress
6) Investments in Subsidiaries
7) Investments in Associates
12) Long Term Lending to Others
13) The Amount Due in a Year's Time
24) Suitable Sub-Classifications
25) Total Carrying Amount
26) Carrying Amount of Each Classification Group
27) Accounts and Notes Receivables-Trade
30) Other Receivables and Prepaid Expenses
32) Cash on Hand and at Bank
33) Long - Term Loans
37) Short Term Bank Loans and Overdrafts
39) Accounts and Notes Payable-Trade
43)Dividends Payable
44) Other Payables and Accrued Expenses
45) Total provisions
47) The number or Amount of Shares Authorised, Issued and Outstanding
51) Retained Earnings
52) Total Reserves
53) Details of Reserves

Sublist 2 Income Statement items Required by the IASs +CML+ CA
1) Sales and Operating Revenues
3) Revenue From Associates
4) Interest Income
6) Cost of Operating Revenues Recognised as an Expense During the Period
8) Capital Gains or Losses of Disposal of Fixed Assets or Investments
9) Previous years expenses or revenues
11) Transfers to Capital Reserves
13) Net Profit for the Period

<u>Sublist 3 General Information Required by the IASs +CML+ CA</u>
1) Name, Legal Form of Enterprise and Country of Incorporation
2) Nature of Activities of the Company + Subsidiaries
3) Currency of the Financial Statements
4) Corresponding Figures of the Preceding Year
5) Period Covered by the Financial Statements
6) A Statement of Shares or Debentures Issued During the Year

<u>Sublist 4 Balance Sheet Required by the IASs + the CML</u>
7) Cost of Marketable Securities

<u>Sublist 6 Disclosure Items in the Notes Including Accounting Policies Required by the IASs + the CML</u>
32) When the Amount of a Contingent Loss Cannot be Recognised as an Expense and a Liability Because Probable Loss Could not Be Estimated, the Existence of a Contingent Loss Should be Disclosed in the Financial Statements, Unless the Possibility of Loss is Remote.
34) Nature of the Contingency and Uncertain Factors which may Affect Future Outcomes
35) Estimate of the Financial Effect (if Applicable or a Statement that such an Estimate Cannot be Made)
Events Occurring After the Balance Sheet Date:
36) Subsequent Events that Provide Additional Evidence Regarding Conditions Existing at Balance Sheet Date Require Adjustment of Financial Statements
37) Those Subsequent Events Which do not Affect the Condition of Assets or Liabilities at the Balance Sheet Date but are of such Importance that Omission to Disclose them Would Affect the Ability of the users of Financial Statement to Make Proper Decisions, should be Disclosed.
<i>When Subsequent Events are Disclosed, the Following Information Should be Provided:</i>
38) Nature of the Event
39) An Estimate of the Financial Effect or a Statement that such an estimate cannot be Made
40) Dividends Proposed or Declared After the Balance Sheet Date but Before Approval of the Financial Statements Should Either be Adjusted for or Disclosed
Concerning Contracts in Progress:
43) Aggregate Amount of Costs Incurred and Recognised Profits/Losses to Date

44) Amount of Advances Received, The Gross Amount due from/to Customers for Contract Work as an Asset / Liability

46) a) The Gross Amount Due From Customers for Contract Work as an Asset

b) The Gross Amount Due to Customers for Contract Work as a Liability

89) Aggregation of Items of Similar Nature is Permitted, unless Separate Disclosure is Needed for an Understanding of the Effects of the Related Party Transactions on the Financial Statements of the Reporting Enterprise

IAS 25: Accounting for Investments:

93) Profits and Losses on Disposal of Current Investments

94) Changes in Value of such Investments

The following also should be Disclosed:

95) The Fair Value of Investment Properties if they are Accounted for as Long-Term Investments and Not Carried at Fair Value

Sublist 7 Disclosure List of Items Required by Both the CA and CML and and Not Included in the IASs

Specific Items of the Board of Directors' Report:

1) Future Activities

3) The Volume of Export

4) Donations

Appendix C Items which were not applicable by any of the sampled companies

<u>Balance Sheet Disclosure List of Items Required by the IASs +CML+ CA</u>
<u>Sublist 1</u>
9) Long Term Lending to Holding Companies
10) Long Term Lending to Subsidiaries
11) Long Term Lending to Associated Companies
14) Accounts and Notes Receivables-Trade (Long Term)
15) Intercompany Receivables (Long Term)
16) Receivables from Associates (Long Term)
17) Other
18)Goodwill
19)Patents, Trademarks and Similar Assets
22) Deferred Taxes
23) Other
34) Intercompany Loans
35) Loans from Associates
36) Bonds

<u>General Information Disclosure List of Items Required by the IASs +CML+ CA</u>
<u>Sublist 3</u>
8) Changes of the Ownership of the Subsidiaries During the Year
10) Main Changes to the Subsidiary's Fixed Assets

<u>Balance Sheet Additional Items Required by the IASs + the CML</u>
<u>Sublist 4</u>
1) Assets Acquired on Instalment Purchase Plan
2) Land held for development and related development cost
5) Receivables from Directors (long Term)
6) Receivables from Directors (Short Term)
12)Cash Which is not Available for Use, Like Balances Frozen in Foreign Banks by Exchange Restrictions
13) Number of Shares Held in Treasury

14) The Rights, Preferences and Restrictions with Respect to the distribution of dividends and to the Repayment of Capital
15) Cumulative Preference Dividends in Arrears
16) Reaquired Shares
17) Shares Reserved for Future Issuance under Options and Sales Contracts Including the Terms and Amounts
18) Capital Paid in Excess of Par Value (Share Premium)
19) Revaluation Surplus
20) Payables to directors

Income Statement Additional Items Required by the IASs + the CML
Sublist 5
4) Changes in Value of Investments such as:
a) Unrealised Gains and Losses on Current Investments Carried at Market Value, Where such a policy has been Adopted Under IAS25
b) Reductions in Market Value and Reversals of Such Reductions Needed to Carry Current Investments at Lower of Cost and Market Value

Additional Disclosure Items in the Notes Including Accounting Policies Required by the IASs + the CML
Sublist 6
IAS 2: Inventories:
3) The Carrying Amount of Inventories Carried at Net Realisable Value
4) The Amount of any Reversal of any Write-down that is Recognised as an Income
5) The circumstances or Events that led to the Reversal of a writedown of inventories
6) Carrying Amount of Inventories Pledged as Security
IAS4: Depreciation:
For Each Major Group of Fixed Assets, The Following Should Be Disclosed:
8) The Valuation Basis of Each Fixed asset (if Different from Cost, Because it is Required by the CA to Use the Cost as a Measurement Basis for All Balance Sheet Items)
IAS 8: Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies:
Discontinued Operations:
11) Nature of the Discontinued Operation

12) The Industry and Geographical Segments in Which it is Reported in Accordance With IAS 14
13) The Effective Date of Discontinuance for Accounting Purposes
14) The Manner of Discontinuance (i.e., by Sale or Abandonment)
15) Gain or Loss on Discontinuance
16) Accounting Policy Used to Measure that Gain or Loss
17) The Revenue and Profit or Loss from the Ordinary Activities of the Operation for the Period, Together with the Corresponding Amounts for each Prior Period Presented
Changes in Accounting Estimates:
18) Nature of Changes in Accounting Estimates
19) Amount of Significant Changes in Accounting Estimates(if Quantifiable), and If It Is Not Practicable to Quantify the Amount, this Fact Should be Disclosed
Fundamental Errors:
If Benchmark Treatment is Elected:
20) Nature and Amount of the Correction for the Current Period & for each Prior Period
21) Amount of the Correction Which Relates to Periods Prior to those Included in the Comparative Information
22) (a) If Comparative Information has been Restated, this Fact Should be Made Explicit (b) If Comparative Information is Not Restated Because it is Not Practicable to do so, This Fact Should be Disclosed
If Allowed Alternative Treatment is Elected:
20) Nature and Amount of the Correction of the Fundamental Error Which is Reorganised in the Net Profit or Loss for the Current Period
21) Amount of the Correction of the Fundamental Error Which is Included in Each Period for Which "Proforma" Information is Presented
22) (a) The Amount of Correction Relating to Periods Prior to Those Included in the "Pro forma" Information (b) If Presenting a "Pro forma" Information is not Practicable, This Fact Should be Disclosed
Changes in Accounting Policies:
If the Benchmark Treatment was Followed the Following should be Disclosed:
25) The Amount of the Adjustment Relating to Periods Prior to Those Included in the Comparative Information

26) If Comparative Information Has Been Restated, The Fact of Change and Restating Comparative Information Should be Disclosed(if Practicable), or Disclosing the Fact of Being Impractical to Restate Them
If Allowed Alternative Treatment is Elected:
25) The Amount of the Adjustments Included in Each Period for Which “Pro forma” Information is Presented and the Amount of Adjustment Related to Periods Prior to Those Included in the Financial Statements, and
26) If It is Not Practicable to Present “Pro forma” Information, This Fact Should be Disclosed
<i>IAS 9: Research and Development Costs:</i>
29) Amortisation Methods Used
30) Useful Lives or Amortisation Rates Used
31) Reconciliation of the Balance of Unamortised Development Costs at the Beginning and end of the Period Showing Development Costs Recognised as an Asset or as an Expense or Allocated to Other Assets or Written Back
<i>IAS 10 : Contingencies and Events Occurring after the Balance Sheet Date</i>
Contingencies:
33) The Existence of Contingent Gains should be Disclosed if it is Probable that the Gain will be Realised. It is Important, However, that the Disclosure Should Avoid Giving Misleading Implications as to the Likelihood of Realisation..
<i>When Disclosure of Contingencies is Made as Required (i.e., When Conditions Outlined Above Are Met) the Following Information is to be Disclosed</i>
45) Amount of Retention
<i>IAS 12: Accounting for Taxes on Income:</i>
47) Tax Effects, if any, Related to Assets that have been Revalued to Amounts in Excess of Historical Cost or Previous Revaluation
48) An Explanation of the Relationship between Tax Expense and Accounting Income if not Explained by the Tax Rates Effective in the Country of the Reporting Enterprise
Concerning Tax Losses:
49) Amount of Tax Saving Included in Net Income in the Period of the Loss
<i>IAS 16: Property, Plant and Equipment:</i>
For Each Class of Property, Plant and Equipment:
A Reconciliation of the Carrying Amount at the Beginning and End of the Period Showing:
52) Acquisitions Through Business Combinations
53) Increases or Decreases Resulting from Revaluation
54) Reductions in Carrying Amounts

55) Amounts Written Back
56) The Net Exchange Differences Arising on the Translation of the Financial Statements of a Foreign Entity
The Following, Also, Should be Disclosed:
57) Whether, in Determining the “Recoverable Amount” of the Items of Property, Plant and Equipment, Expected Future Cash Flows have been Discounted to their Present Values
58) The Existence and Amounts of Restrictions on Title, and Property, Plant and Equipment Pledged as Security for Liabilities
59) The Accounting Policy for Restoration Costs Relating to Items of Property, Plant and Equipment
When Items of Property, Plant and Equipment are Stated at Revalued Amounts, the Following should be Disclosed:
61) The Basis used to Revalue the Assets
62) The Effective Date of the Revaluation
63) Whether an Independent Valuer was Involved
64) The Nature of any Indices used to Determine Replacement Cost
65) The Carrying Amount of Each Class of Property, Plant and Equipment that would have been Carried at Cost Less Accumulated Depreciation
66) The Revaluation Surplus, Indicating the Movements for the Period and any Restrictions on the Distribution of the Balance to Shareholders
IAS 18: Revenue
68) The Amount of Revenue Arising from Exchanges of Goods or Services included in each Significant Category of Revenue
IAS 21: The Effect of Changes in Foreign Exchange Rates:
70) Net Exchange Differences Classified as a separate component of equity and a Reconciliation of the Amount of such Exchange Differences at the Beginning and End of the Period
When there is a Change in the Classification of a significant Foreign Operation the Following Should be Disclosed:
73) The Nature of the Change in Classification
74) The Reason for the Change
75) The Impact of the Change in Classification on Shareholder's Equity
76) The Impact on Net Profit or Loss for Each Prior Period Presented as if the change in Classification had Occurred at the Beginning of the Earliest Period Presented
The Following Also Should be Disclosed:

77) The Method Selected to Translate Goodwill and Fair Value Adjustments to the Carrying Amounts of Assets and Liabilities Arising on the Acquisition of a Foreign Entity
78) A Change in Exchange Rates Occurring After the Balance Sheet Date Which is of Such an Importance that Nondisclosure Would Affect the Ability of Users of the Financial Statements to Make Proper Evaluations and Decisions should be Disclosed
79) Recommended Additional Disclosure: An Enterprise is Encouraged to Disclose its Foreign Currency Risk Management Policy
IAS 23: Borrowing Costs
89) Aggregation of Items of Similar Nature is Permitted, unless Separate Disclosure is Needed for an Understanding of the Effects of the Related Party Transactions on the Financial Statements of the Reporting Enterprise
IAS 25: Accounting for Investments:
The Accounting Policies For:
91) The Treatment of Changes in Market Value of Current Investments Carried at Market Value
92) The Treatment of a Revaluation Surplus on the Sale of a Revalued Investment..
The Significant Amounts Included in Income for:
93) Profits and Losses on Disposal of Current Investments
94) Changes in Value of such Investments
The following also should be Disclosed:
95) The Fair Value of Investment Properties if they are Accounted for as Long-Term Investments and Not Carried at Fair Value
96) Significant Restrictions on the Realisability of Investments or the Remittance of Income and Proceeds of Disposal
For Long-Term Investments Stated at Revalued Amounts:
97) The Policy for Frequency of Revaluations
98) The Date of the Latest Revaluation
99) The Basis of Revaluation and Whether an External Valuer was Involved
The Following also should be Disclosed:
100) The Changes for the Period in Revaluation Surplus and the Nature of such Changes
101) For Enterprises whose main Business is the Holding of Investments an Analysis of the Portfolio of Investments
IAS 28 : Accounting in Investments in Associates:

102) If the Equity Method Would be the Appropriate Accounting Method for the Associate if the Investor issued Consolidated Financial Statements, Using Cost or Revalued Amounts, the Investor should Disclose what have been the Effect had if the Equity Method been Applied

104) The Methods used to Account for Investment

Additional Disclosure List of Items Required by IASs Only

Sublist 9

Cash Flow Statement:

11) The Aggregate Cash Flow Arising From Acquisition and from Disposals of Subsidiaries or other Business Units should be Presented Separately and Classified as Investing Activities

12) The Following also should be Disclosed:

- The Total Purchase or Disposal Consideration
- The Portion of the Purchase or Disposal Consideration
- The Amount of Cash and Cash Equivalents in the Subsidiary or Business Unit Acquired or Disposed of

13) The Amount of Assets and Liabilities other than Cash or Cash Equivalents in the Subsidiaries or Business Unit Acquired or Disposed of, Summarised by each Major Category

Appendix D Items slightly Increased (Less than 10%)

<u>Sublist 1 Balance sheet items Required by the IASs +CML+ CA</u>
5) Classification of projects in progress
31) The Provision of Doubtful Debts
38) Current Portions of Long Term Liabilities
46) Details of Provisions
<u>Sublist 2 Income Statement Required by the IASs +CML+ CA</u>
12) Differences from Foreign Currency Translation / Exchange
<u>Sublist 4 Balance Sheet Required by the IASs +CML</u>
<u>Cash on Hand and at Bank</u>
10) Cash on Hand and bank current accounts
11) Long Term Deposits
<u>Sublist 6 Disclosure Items in the Notes Including Accounting Policies Required by the IASs +CML</u>
1) Accounting Policies Adopted in Measuring Inventories
98) The Date of the Latest Revaluation
103) An Appropriate Listing and Description of Significant Associates Including the Proportion of Ownership Interest and, if Different, the Proportion of Voting Power Held